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OFFICE OF THE GOVERNOR

The SWIB Workforce Development Needs Study

A Report to the Mississippi Legislature

February 2015

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EXECUTIVE SUMMARY

The State Workforce Investment Board (SWIB) was directed through a 2014 amendment to Miss. Code Ann. § 71-5-353 to conduct a study on workforce development needs in Mississippi and report back to the legislature in February 2015. Specifically, SWIB was directed to:

1. Identify Mississippi's workforce development needs, including:

- a. The current and projected workforce needs of existing and potential Mississippi industry.
- b. The needs of the state's workers and residents requiring additional workforce training to improve their work skills.
- c. The needs of workforce service and training providers to improve their ability to offer industry-relevant training.

2. Assess Mississippi's current workforce development service delivery structure, including:

- d. A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis of the current service delivery structure.
- e. Identification of strategic options of workforce development services.
- f. Development of results-oriented measures that can be tracked over time.

3. Provide recommendations on future uses of state workforce investment funds, including:

- g. Promotion strategies for workforce development programs.
- h. Initiatives to reduce dropout rates.
- i. Long-term monitoring of the state's workforce development programs.
- j. Study of the potential restructuring of the state's workforce programs and delivery systems.

Beginning in July 2014, SWIB directed and conducted a series of activities to meet the legislative intent. SWIB directed a labor market

analysis in conjunction with the Mississippi Department of Employment Security (MDES), the Mississippi Department of Human Services (MDHS), the Mississippi Development Authority (MDA), and the National Strategic Planning and Analysis Research Center (nSPARC) to identify Mississippi's workforce development needs. To assess Mississippi's current workforce development service delivery structure, SWIB formed a task force comprised of leaders from workforce, education, and training organizations in the state. SWIB also authorized a review of the Workforce Enhancement Training (WET) fund and undertook an examination of the 2014 Workforce Innovation and Opportunity Act (WIOA) as it relates to the development of a unified state workforce system plan. Finally, SWIB collaborated with the Georgetown University Center on Education and the Workforce (CEW) to identify future research on how the creation of human capital can be utilized by the business community in the state.

Currently, Mississippi's economy is strong. After struggling with high unemployment rates, the state's labor market is experiencing a recovery that offers new economic opportunities for workers and job seekers. Employers are showing confidence in the state's workforce, establishing new jobs and looking for qualified employees. In 2014, the manufacturing sector created the largest number of jobs with 21,415, and the natural resource sectors, such as agriculture, forestry, and mining, created the second largest number of jobs with 21,254.

Three key findings emerged from the study:

- A continued decline in workforce participation rates remain a critical threat to the long-term economic viability of the state.
- Middle-skill jobs present the strongest demand and the largest gap in workforce needs.
- The state lacks a coordinated workforce development system that operates as an ecosystem where all parts are connected and line up to achieve common goals and visions.

SWIB identified three goals that should guide the operation and functioning of the state workforce system:

- 1. Improve workforce participation rates so every Mississippian will have the opportunity to find gainful employment.**
- 2. Eliminate the workforce skill gap for the increasing demand in middle-skill jobs.**
- 3. Create a workforce system that acts and functions as an ecosystem.**

Several key recommendations are proposed to guide future focus on workforce development in the state:

- Develop a long-term, unified, strategic workforce initiative plan aimed at aligning goals and objectives that would define the state workforce system.
- Develop a shared governance with clear policies and procedures to ensure that all of the elements of the workforce development system remain coordinated.
- Strengthen interagency partnerships to position the state to compete more effectively for grant opportunities.
- Build more bridges between all educational sectors (K-16) and employers to capitalize on state investment in education and grow high-skill job opportunities through experiential education opportunities such as internships and co-ops.
- Develop cross-program performance metrics to enable improved monitoring of workforce development programs to gauge progress.
- Continue to invest in integrated technology to meet the unified technology requirements of WIOA and other federal initiatives.
- Engage in continuous research and analysis to realize the potential of the state's workforce programs and delivery systems.
- Deliver a unified message to promote the components of the training and workforce system.

MISSISSIPPI'S WORKFORCE DEVELOPMENT NEEDS

As directed by Miss. Code Ann. § 71-5-353, SWIB leveraged existing state resources and entities to conduct a labor market analysis to identify Mississippi's workforce development needs. The process included an examination of the post-recession Mississippi economy and paid particular attention to workforce opportunities and vulnerabilities.

Overview of Mississippi's Economy

The great recession of 2007-2009 began as a financial crisis but played out as an enduring employment crisis affecting many employees and job seekers. Mississippi, like the rest of the country, experienced a dramatic loss of jobs that translated into historically high unemployment rates with many people out of work for more than 27 weeks. Like many other states, Mississippi struggled with high unemployment rates but is now experiencing a recovery that offers new economic opportunities for workers and job seekers.

Employment and Emerging Opportunities

Mississippi's unemployment rate has dropped from 10.6 percent in 2010 to 7.2 percent in 2014 (see Appendix A). The number of underemployed citizens declined from 17.6 percent in 2010 to 13.6 percent in 2014 (see Appendix B). State median household income has grown for all income brackets except the top quintile, which is good news for middle-class workers (see Appendix C). Bureau of Labor Statistics (BLS) data show a boom in the growth of new businesses with 2,146 new starts in 2011, bringing the number of new business establishments since 2011 to more than 70,000 in Mississippi (see Appendix D).

Mississippi has several major industrial sectors. Wholesale and retail trade constitute the largest sector (16 percent of total employment), and manufacturing is the second largest sector (14 percent of total employment). Other sectors that account for more than 10 percent of total employment include tourism (accommodation and

leisure), healthcare, and educational services. Together these sectors account for 65 percent of all employment in the state (see Appendix E).

Employers are showing confidence in the state's workforce, establishing new jobs and looking for qualified employees. In 2014 alone, there were 108,613 job openings posted statewide. Manufacturing constituted the largest amount of job creation in the state with 21,415 job openings. In addition, natural resource sectors such as agriculture, forestry, and mining provided 21,254 job opportunities (see Appendix F).

Manufacturing not only provides the largest number of job opportunities but also offers high-wage opportunities. Since 2012, more than 300 new manufacturing establishments have opened in the state, and 50 of those are advanced manufacturers that pay higher wages than traditional manufacturers. Moreover, jobs created by recently attracted advanced manufacturers pay even more than existing advanced manufacturers in the state — about \$5,000 more, or an annual average of \$51,000.

Labor Force Preparedness and Preparation

Despite the improved economic outlook, the state has some serious vulnerabilities. According to the Mississippi Department of Human Services (MDHS), more than 300,000 people are able to work in Mississippi, but because they are unable to gain meaningful employment, they rely on the Supplemental Nutrition Assistance Program (SNAP) and other public programs for financial support. Equipping SNAP recipients to take better advantage of available and emerging economic opportunities would have a significant impact on the state's unemployment rate. Estimates show that when adjusting for this population, the unemployment rate could drop substantially from 7.2 to 5.1 percent.

Many of the long-term unemployed become discouraged and drop out of the labor force, contributing to the decline of workforce availability in the state. The Bureau of Labor Statistics shows that the workforce participation rate in the state has declined from 59.2 percent in 2011 to 54.6 percent in 2014, placing the state at the bottom for workforce availability and contributing to Mississippi's persistently high poverty rate (24 percent in 2014) (see Appendices G and H).

In addition, employers have had problems filling open jobs. The main reason is that individuals do not

have the educational or work requirements to fill the open jobs.

Developing career readiness is a process that should start with students in early education and continue through higher education. This process includes developing core competencies in students over time to help prepare them to transition to the workplace. The seven core competencies include critical thinking and problem solving; oral and written communications; teamwork and collaboration; information technology application; leadership; professionalism and work ethic; and career management (see Figure 1).

K-16 CORE COMPETENCIES

Career readiness is a process of attaining and demonstrating requisite competencies, from K-16, to prepare students to transition to the workplace. The core competency skills identified by the SWIB Task Force include:

CRITICAL THINKING/PROBLEM SOLVING

Exercise sound reasoning and analytical thinking; obtain, interpret, and use knowledge, facts, and data; demonstrate originality and inventiveness.

ORAL/WRITTEN COMMUNICATIONS

Articulate thoughts and ideas clearly and effectively; demonstrate public speaking skills; communicate new ideas to others through writing and editing.

TEAMWORK/COLLABORATION

Build collaborative relationships; work in team structure; negotiate and manage conflicts.

INFORMATION TECHNOLOGY APPLICATION

Select and use appropriate technology; apply computing skills to problem solving.

LEADERSHIP

Leverage the strengths of others; use interpersonal skills and emotions effectively; organize, prioritize, and delegate work.

PROFESSIONALISM/WORK ETHIC

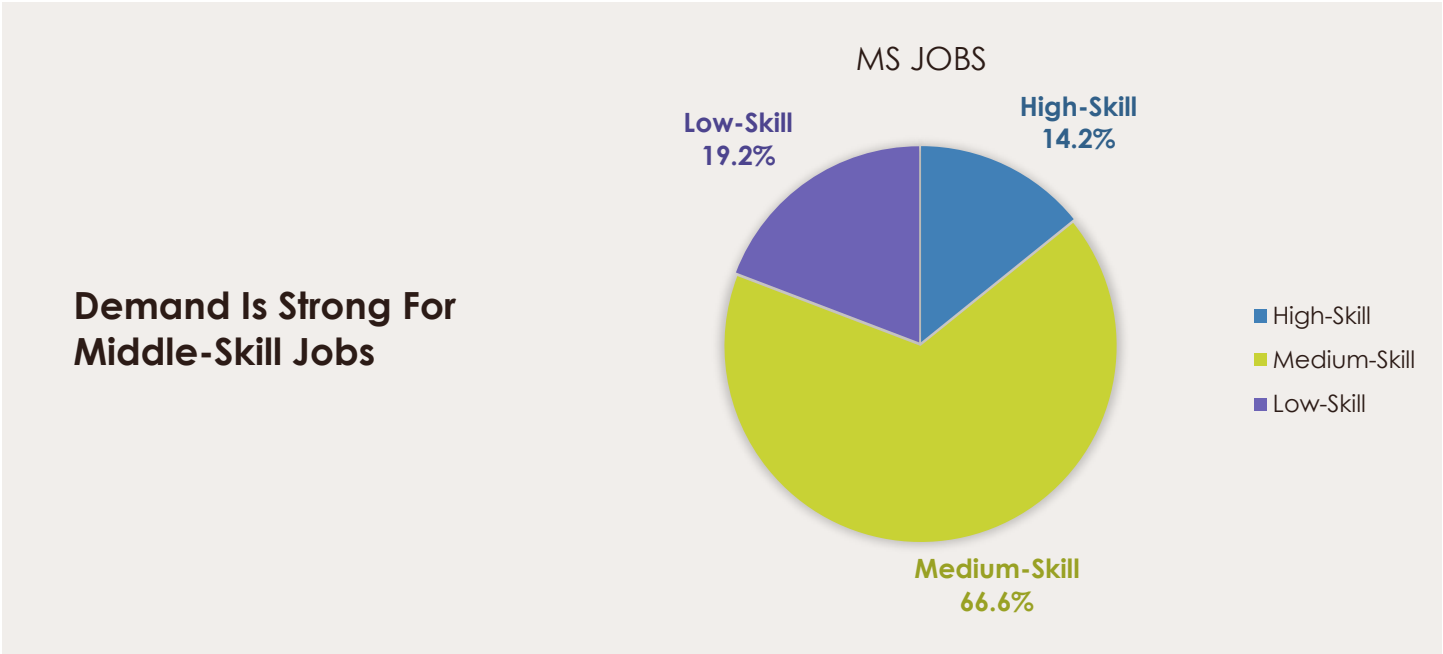
Demonstrate personal accountability, effective work habits, integrity, and ethical behavior; act responsibly; learn from mistakes.

CAREER MANAGEMENT

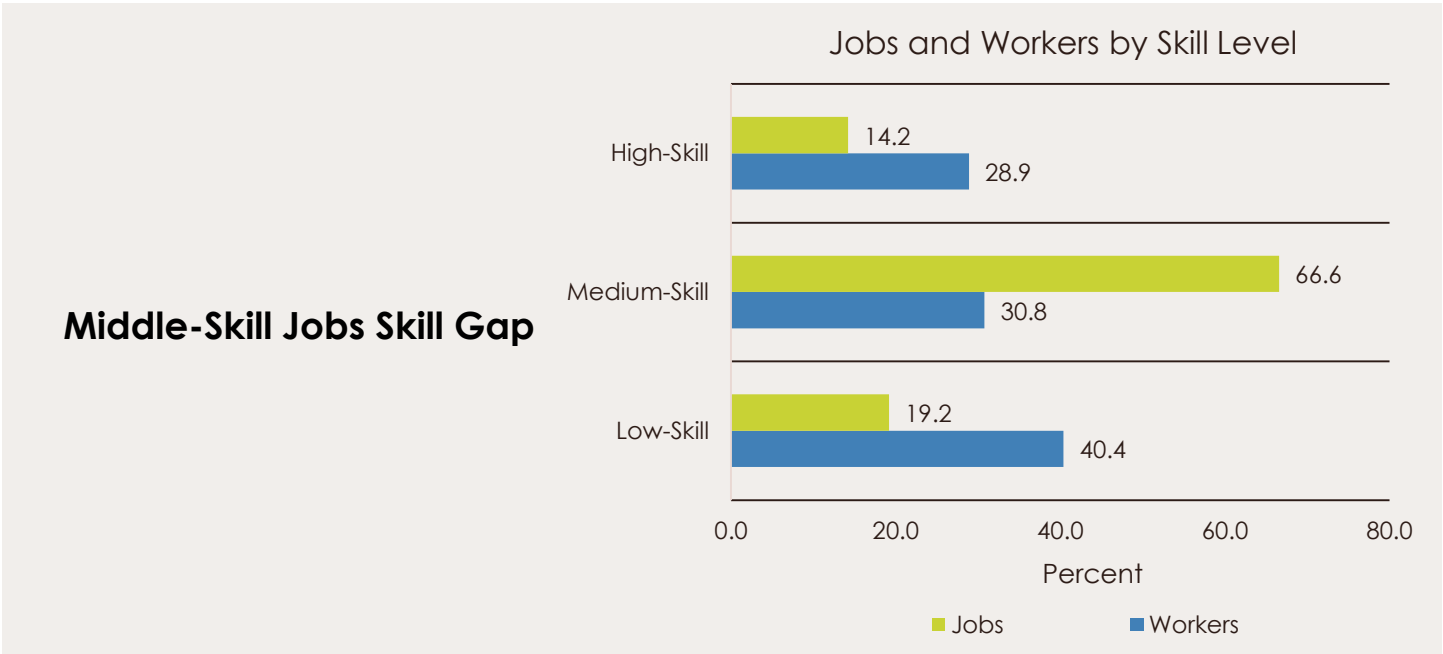
Identify and articulate skills, strengths, and experiences; identify areas for professional growth and self-advocacy; explore job options and pursue opportunities.

In fact, one of Mississippi's most pressing workforce needs is to prepare individuals for opportunities in middle-skill jobs, or those that require more than a high school diploma but less than a four-year college degree. Middle-skill jobs account for two-thirds of jobs in the state, but less than one-third of state workers have the educational requirements to fill a middle-skill job. In particular, middle-skill jobs are seeing tremendous growth in the dominant sectors in the state.

To reach parity with the nation, Mississippi must also close the gap with the number of jobs requiring a four-year degree or more education. In this case, the problem is not producing four-year college graduates but retaining them. Many Mississippians with college degrees leave the state for job opportunities elsewhere. The state must create and attract more jobs that require advanced degrees and professional skills (see Appendix L).



Source: BLS, 2014.



Source: BLS, 2014.

TOP 5 MIDDLE SKILL JOBS BY SECTOR

Manufacturing (Top 5 Middle Skill Jobs)	
Occupation	Openings
Welders	1,599
Structural Metal Fabricators and Fitters	747
Upholsterers	589
Team Assemblers	554
Heavy and Tractor-Trailer Truck Drivers	440

Accommodation/Food Services (Top 5 Middle Skill Jobs)	
Occupation	Openings
Food Service Managers	210
Inspectors, Testers, Sorters, Samplers, and Weighers	150
Food Preparation and Serving Workers Supervisors	117
Electrical and Electronics Repairers	100
Light Truck or Delivery Services Drivers	100

Wholesale/Retail Trade (Top 5 Middle Skill Jobs)	
Occupation	Openings
Customer Service Representatives	466
Retail Sales Worker Supervisors	318
Heavy and Tractor-Trailer Truck Drivers	166
Light Truck or Delivery Service Drivers	115
Merchandise Displayers and Window Trimmers	102

Healthcare (Top 5 Middle Skill Jobs)	
Occupation	Openings
Nursing Assistants	1,698
Registered Nurses	1,149
Licensed Practical/Vocational Nurses	404
Healthcare Support Workers	266
Office Clerks	120

**Full list of 2014 jobs by sector (Appendix K)*

WORKFORCE DEVELOPMENT SERVICE DELIVERY STRUCTURE

As directed by Miss. Code Ann. § 71-5-353, SWIB formed a task force to assess Mississippi's current workforce development service delivery structure (see Appendix M). The task force was comprised of leaders from workforce, education, and training organizations in the state to (1) define the workforce system and (2) identify areas of priority.

The task force approached workforce development in a way that included skill development and work preparation along a continuum: basic education or academic skills, career and technical skills, career and work readiness, and entrepreneurship skills. The task force also adopted a workforce development "ecosystem" mindset to understand how individuals currently move through the system. Task force members agreed a workforce development ecosystem must equip individuals with (1) core competencies, (2) foundational skills and (3) advanced skills needed to be successful in the workforce. In addition, the ecosystem must offer employment opportunities to support individuals and families and produce wealth for the state of Mississippi.

Assessment of Workforce Service and Training Providers

The task force noted several challenges that workforce service and training providers face in preparing individuals for the workforce of the future, including: (1) a low labor force participation rate because people need training to move into the workforce; (2) low education levels, which require remediation and dropout recovery work; (3) lack of coordinated ancillary services such as transportation and child care to get people to take advantage of education and training opportunities; and (4) a lack of coordinated messaging efforts to advertise the availability of training services to potential participants and communicate information about jobs and careers.

The task force also noted that programs and services need to be updated continually to meet the needs of industry partners and to provide the incumbent workforce and job seekers with the most current training available. Workforce training providers need a way to find out quickly about the changing needs in the workplace and to adapt training programs accordingly. Finally, the task force found that workforce training providers from all sectors agreed

on the huge need for more coordination and long-term planning in the workforce development training system.

Assessment of Current Workforce Development System

The task force agreed that the current workforce system is structured to:

- Deliver education and training to prepare individuals for jobs and careers.
- Upgrade, maintain, and fine-tune the skills of the incumbent workforce.
- Connect individuals to jobs and offer supportive services.
- Support business retention, expansion, and recruitment.
- Maintain and improve information that integrates education and workforce data, providing high-quality labor market information.

The task force also addressed opportunities and challenges of Mississippi's current workforce development system. As a result, several strengths, weaknesses, opportunities, and threats to the state system emerged.

Strengths of the Current Workforce Development System:

- Contains all of the necessary elements of future-ready workforce development ecosystem.
- Recognizes that workforce development is shared responsibility with roles for educational partners, including K-12 schools, two-year colleges, and institutions of higher learning; workforce support services; and public and privately administered programs by employers, business and industry associations, communities, and faith-based partners.
- Provides cross-agency support services that promote education, professional development, and training, especially through the services provided by MDE, community colleges, and institutions of higher learning.
- Connects people to jobs through agency services and innovative use of technology. MDES and MDHS currently provide essential support services for people to connect and reconnect with jobs. MDES provides the technological platform and expertise to bridge

job seekers effectively with employers by connecting multiple stakeholders. MDHS implements programs to assist individuals and families to become self-sufficient. MDOT coordinates a network of public and specialized transportation agencies that help provide access to jobs, education, and training opportunities.

- Leverages the system of Planning and Development Districts (PDDs) across the state to ensure that projects and programs are developed in line with regional long-range plans.
- Integrates community-based organizations (CBOs) into the slate of statewide services.

Weaknesses of the Current Workforce Development System:

- Ineffective matching of incumbent workers and job seekers to career readiness programs.
- Ineffective matching of college students with career strengthening opportunities, such as experiential education and co-ops.
- Lack of system coordination to inform training and education programs to keep them on the leading edge of workforce expectations.
- Competing visions and interests across sectors, programs, and agencies.

Opportunities for the Current Workforce Development System:

- To develop a responsive and proactive workforce ecosystem built on collaboration between statewide leaders, regional experts, and local developers.
- To support state and local efforts dynamically for business retention, expansion, and recruitment.
- To adapt education and training programs to meet current needs and emerging opportunities.
- To develop cross-program performance metrics to enable improved monitoring of workforce development programs to gauge progress in achieving performance benchmarks.
- To expand technology to meet the unified technology requirements of WIOA and other federal initiatives.

Threats to the Current Workforce Development System:

- Too complex and hard to navigate.
- Insufficient feedback mechanism to inform education and workforce partners so they can adapt to changes in the workforce development ecosystem.
- Changing federal regulations regarding the development of cross-program, cross-agency performance metrics.

Identification of Strategic Options of Workforce Development Services

To help in the process of identifying appropriate strategic options for the state, SWIB authorized reviews of strategies and mechanisms currently in place. Specifically, SWIB asked for a review of the Workforce Enhancement Training (WET) fund model and an examination of the reauthorization of the Workforce Investment Act (WIA) into the Workforce Innovation and Opportunity Act (WIOA).

Review of the WET Fund Model

To help ensure the efficacy and effectiveness of state workforce development training programs, SWIB has asked the Office of the State Auditor (OSA) to conduct a review of WET-funded projects. The proposed analyses that are underway will examine training provision from four perspectives: (1) the community/junior college, (2) the employer, (3) the employee, and (4) the community. The final review will provide objective, analysis-based recommendations aimed at improving the effectiveness and efficiency of the workforce development training system.

Examination of the WIOA

The Workforce Investment Act (WIA) of 1998 has been the primary mechanism for the delivery of federal workforce funds to Mississippi. In 2014 WIA was reauthorized as the Workforce Innovation and Opportunity Act (WIOA). WIOA requires the submission of a unified state plan to create a workforce system that closes the skill gap and helps workers and businesses succeed. The program requires states to align workforce programs with each other and the needs of employers to produce a skilled workforce with an emphasis on closing the middle-skills gap. The state plan must be strategic and operational, clearly describing Mississippi's vision

and goals for preparing a skilled workforce that meets employer needs.

The state "playbook," as recommended by the National Skills Coalition, should describe the overall strategy for workforce development and how it will meet identified skill needs for workers, job seekers, and employers. Mississippi's plan should include strategies in four areas:

- Sector partnerships – identifying local or regional partnerships and funding streams.
- Career pathways – collaborating with stakeholders, including local programs, to use adult education, wrap-around support, and sector partnerships.
- Cross-program data and measurement – developing cross-agency data and measurement to link data and present them in dashboards, to measure outcomes, and to provide training and program performance scorecards.
- Job-driven investments – linking training to the state's in-demand industry sectors and occupations.

Common metrics, or primary indicators of performance, are required in the state plan to link data across workforce and education programs for the purpose of measuring outcomes. Some common metrics in adult programs could be unsubsidized employment, median earnings, receipt of a secondary diploma or recognized postsecondary credential, measurable skills gains toward a credential or employment, and employer engagement. A similar set of common measures should be developed for youth programs.

The WIOA mandates that the SWIB assist in the development of strategies for technological improvements, such as aligning technology and data systems across partner programs to create a "one-stop" location for client intake, data collection, and case management.

As WIOA mandates, a meeting of required partners representing core program was convened by the Mississippi Department of Employment Security (MDES) in partnership with SWIB. Each partner was given an opportunity to discuss current service delivery processes, eligibility, data collection and reporting, performance, and information management systems. This discussion helped SWIB better understand strategic options and will be used by MDES and SWIB in drafting Mississippi's WIOA plan.

Development of results-oriented measures

Mississippi is well-positioned for the long-term monitoring of workforce ecosystem performance and the tracking of workforce and education performance benchmarks. In this regard, Mississippi has a well-established and robust statewide longitudinal data system (SLDS) that the U.S.

Department of Education has deemed as one of the best in the country. The Mississippi SLDS includes information from education (PK-20) and workforce agencies in the state that will be aligned to create cross-program performance metrics. The metrics will be actionable, valid, reliable, timely, easy-to-understand, and aligned across sector and delivery mechanisms.

RECOMMENDATIONS FOR THE FUTURE

Drawing upon the findings of this study, several key recommendations emerged to guide future focus on workforce development in the state.

Develop a Long-term, Unified, Strategic Workforce Initiative Plan

SWIB recommends the development of a long-term, unified, strategic workforce initiative plan to serve as the state's blueprint for a coordinated workforce development ecosystem. The unified strategic plan would outline long-term goals and objectives that would define the state workforce system for the next several years. The plan would incorporate regional and local long-range plans, recognizing the autonomy of local organizational partners, and multiyear incremental objectives to define, implement, and measure success of the state workforce development ecosystem. Development of the plan would be a collaborative effort of SWIB and workforce, education, and economic development stakeholders across the state.

Develop a Shared Governance Structure with Clear Policies and Procedures

SWIB recommends the development of a shared governance structure with clear policies and procedures to ensure that all of the elements of the workforce development ecosystem remain coordinated and to improve the ability to offer industry-relevant training. A set of rules and regulations would be developed to help ensure the efficacy and effectiveness of the state workforce development ecosystem.

Strengthen Interagency Partnerships

SWIB recommends strengthening interagency partnerships and developing ongoing working relationships to improve the state's ability to: (1) meet the education and training requirements of the incumbent workforce, (2) design initiatives to reduce the state's high school dropout rate, (3) design

initiatives to increase college graduations rates, (4) promote workforce development programs, and (5) compete for grant opportunities.

Build More Bridges Between All Educational sectors (K-16) and Employers

SWIB recommends additional linkages between all educational sectors (K-16) and employers to capitalize on state investment in education and to grow high-skill job opportunities through experiential education opportunities such as internships and co-ops.

Develop Cross-program Performance Metrics

SWIB recommends leveraging the Mississippi SLDS in the design, measurement, and analysis of cross-program performance metrics. Mississippi's SLDS is a ready platform for the generation of common performance metrics across workforce development programs and activities.

Continue to Invest in Integrated Technology to Meet the Unified Technology Requirements of WIOA and Other Federal Initiatives

SWIB recommends continued support of integrated technological innovation, similar to that which has garnered national awards for the Mississippi Department of Employment Security and the Mississippi Department of Information Technology.

Engage in Continuous Research and Analysis to Realize the Potential of the State's Workforce Programs and Delivery Systems

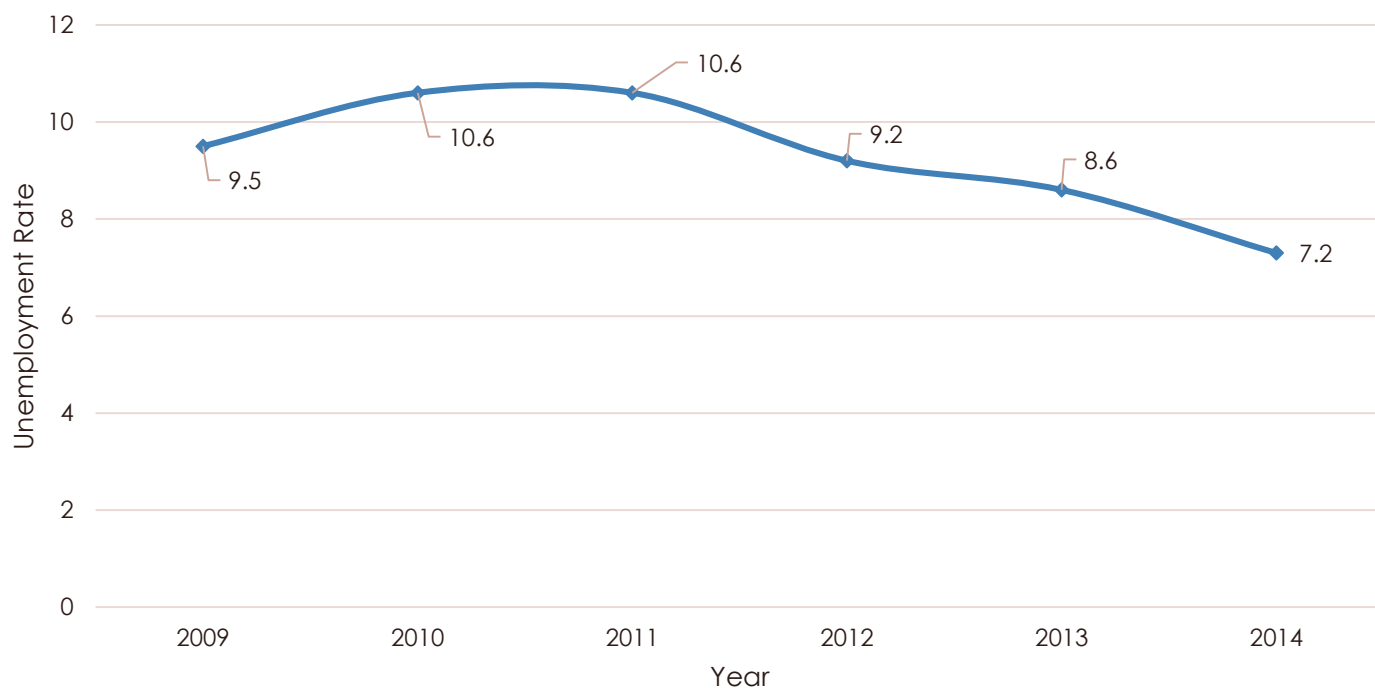
SWIB recommends supporting continuous research to generate information that can inform the improvement of Mississippi's workforce development ecosystem. SWIB further recommends continued partnerships with the Georgetown University Center on Education and the Workforce (CEW), the National Strategic Planning & Analysis Research

Center (nSPARC), and similar organizations or entities to propose and conduct research to evaluate Mississippi's economy further and map out current and future workforce needs to align with the state's economic goals.

Deliver a Unified Message

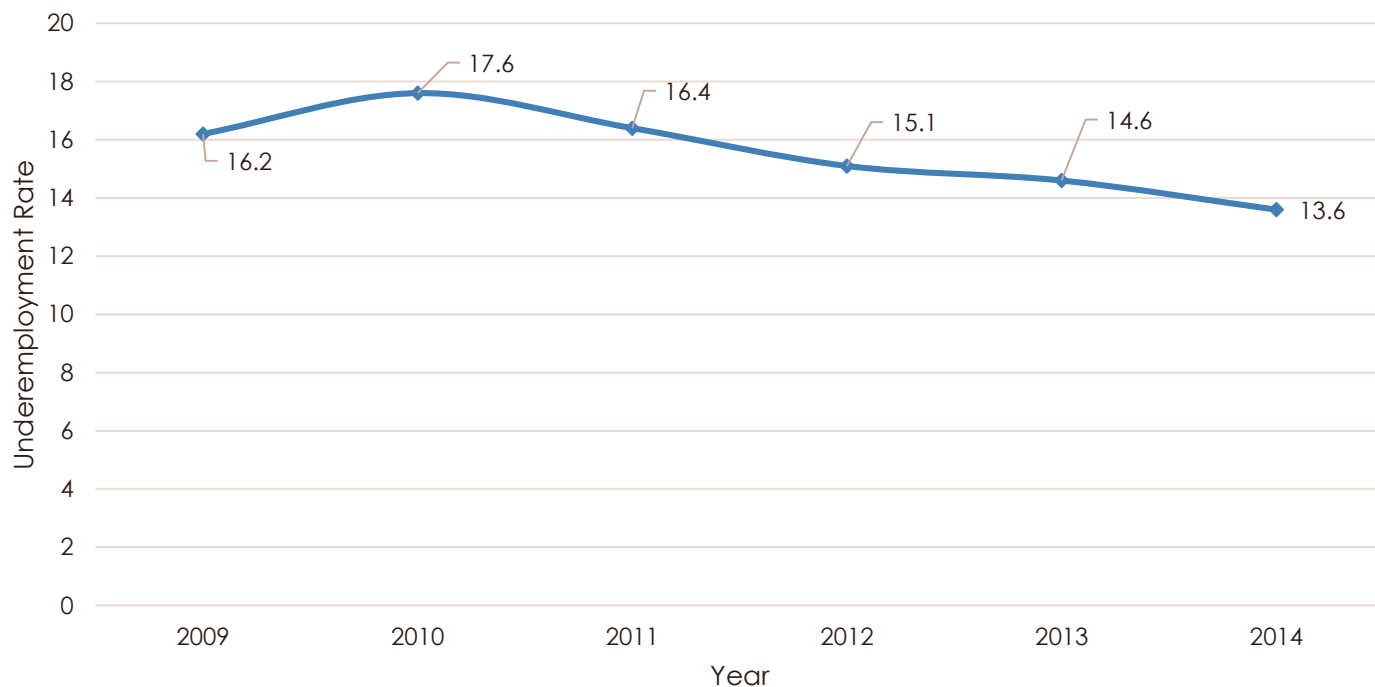
The SWIB recommends that partners in the state's workforce development system develop a unified message to promote and market the components of the training and workforce system.

APPENDIX A: MISSISSIPPI UNEMPLOYMENT RATE, 2009-2014



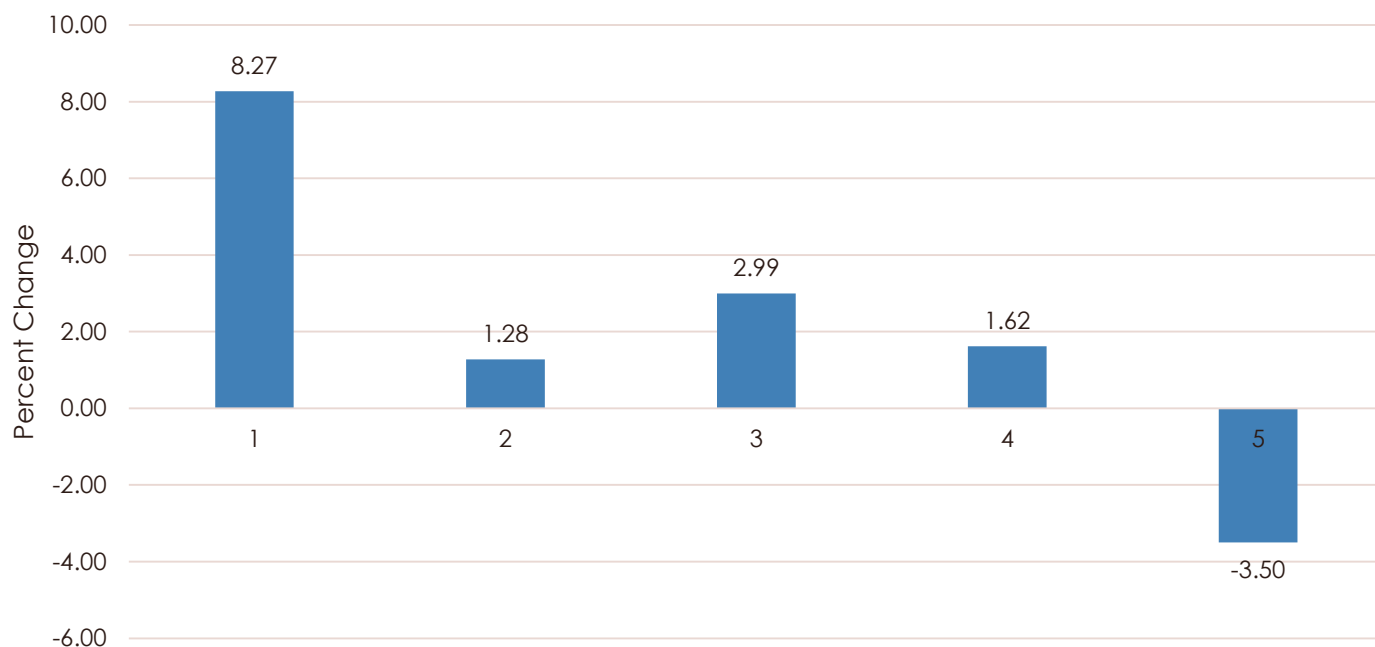
Source: Bureau of Labor Statistics, 2014.

APPENDIX B: MISSISSIPPI UNDEREMPLOYMENT RATE, 2009-2014



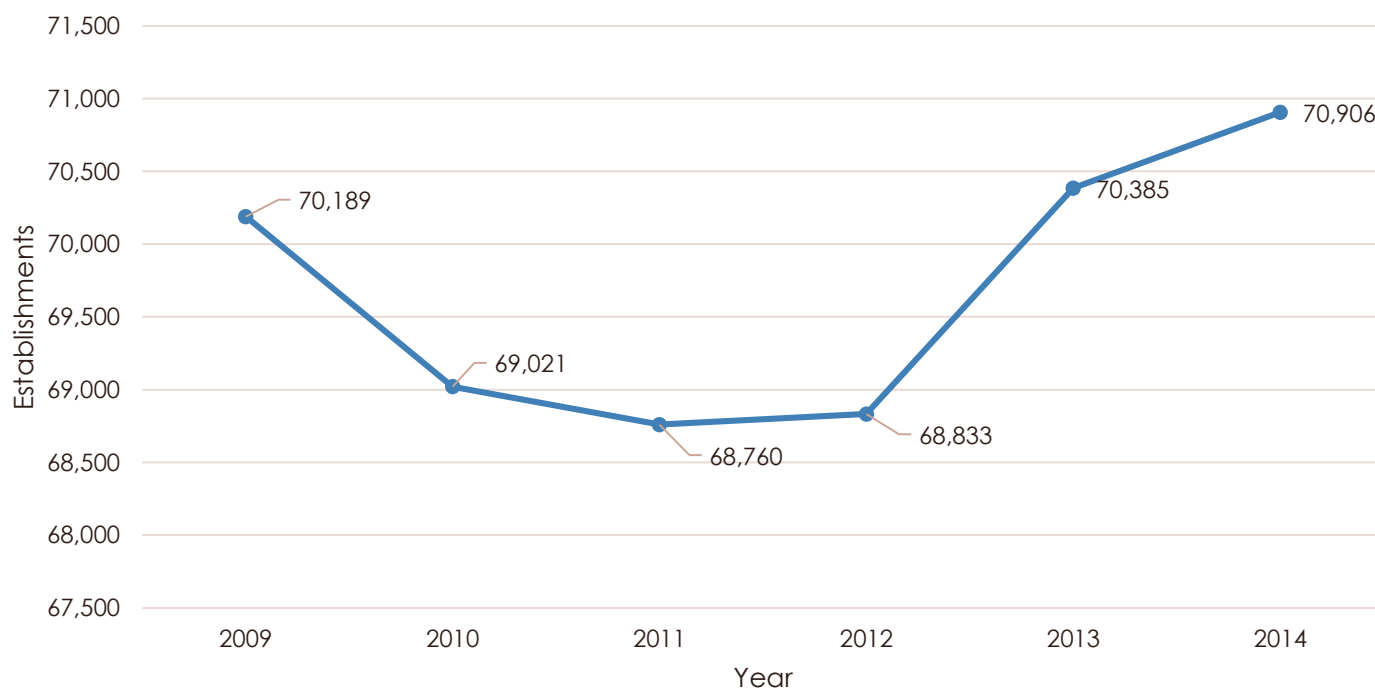
Source: Bureau of Labor Statistics, 2014.

APPENDIX C: MISSISSIPPI PERCENT CHANGE IN MEDIAN HOUSEHOLD INCOME BY INCOME QUINTILES, 2009-2013



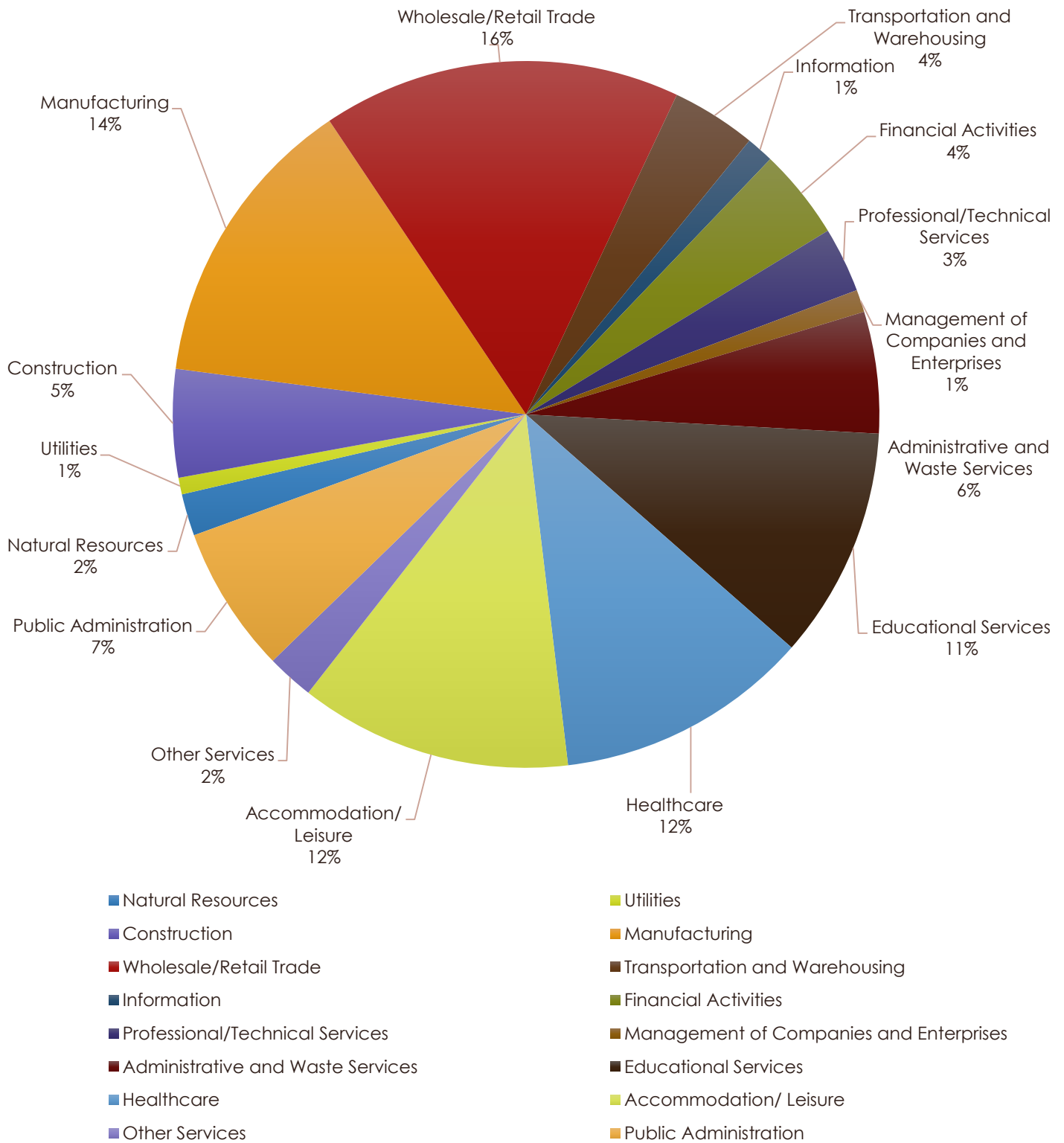
Source: U.S. Census Bureau Current Population Survey, 2014.

APPENDIX D: NUMBER OF BUSINESS ESTABLISHMENTS IN MISSISSIPPI, 2009-2014



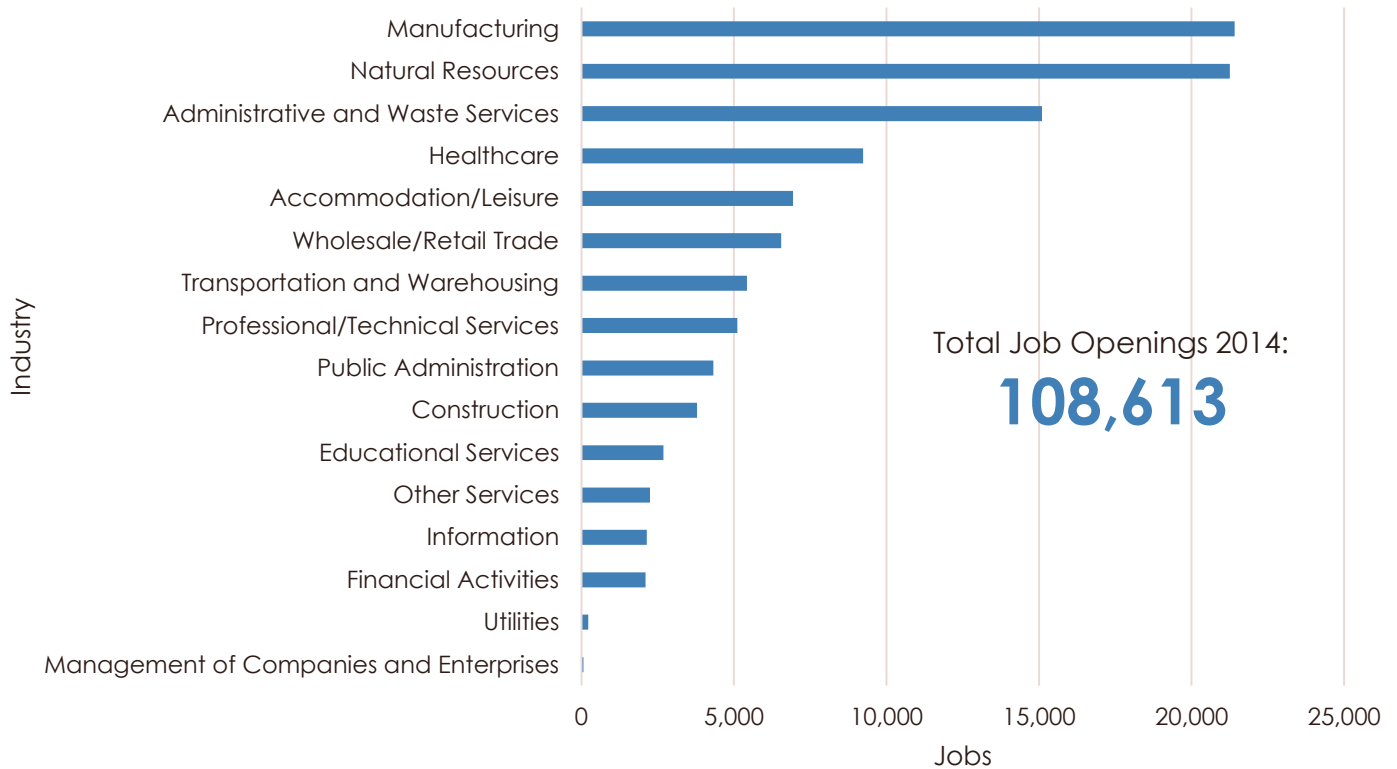
Source: U.S. Bureau of Labor Statistics, 2014.

APPENDIX E: MISSISSIPPI INDUSTRY SECTORS, 2014



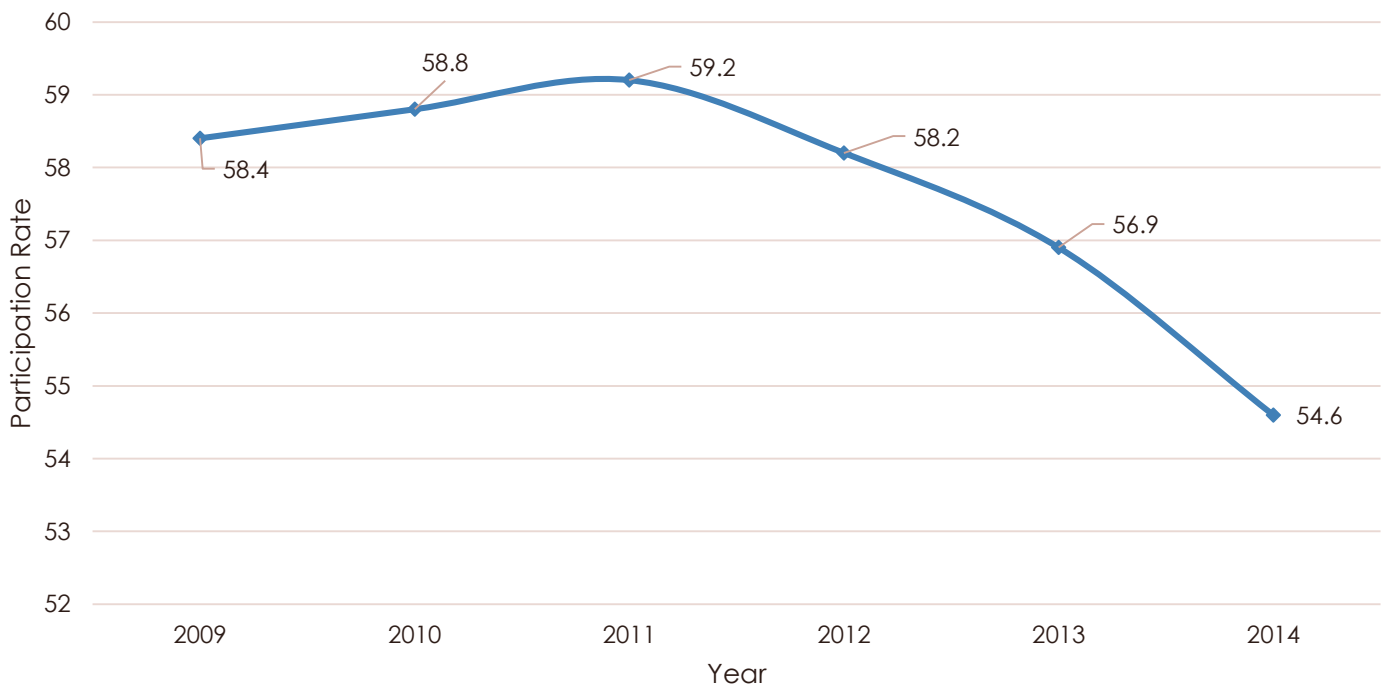
Source: Bureau of Labor Statistics, 2015.

APPENDIX F: 2014 JOB POSTINGS BY SECTOR



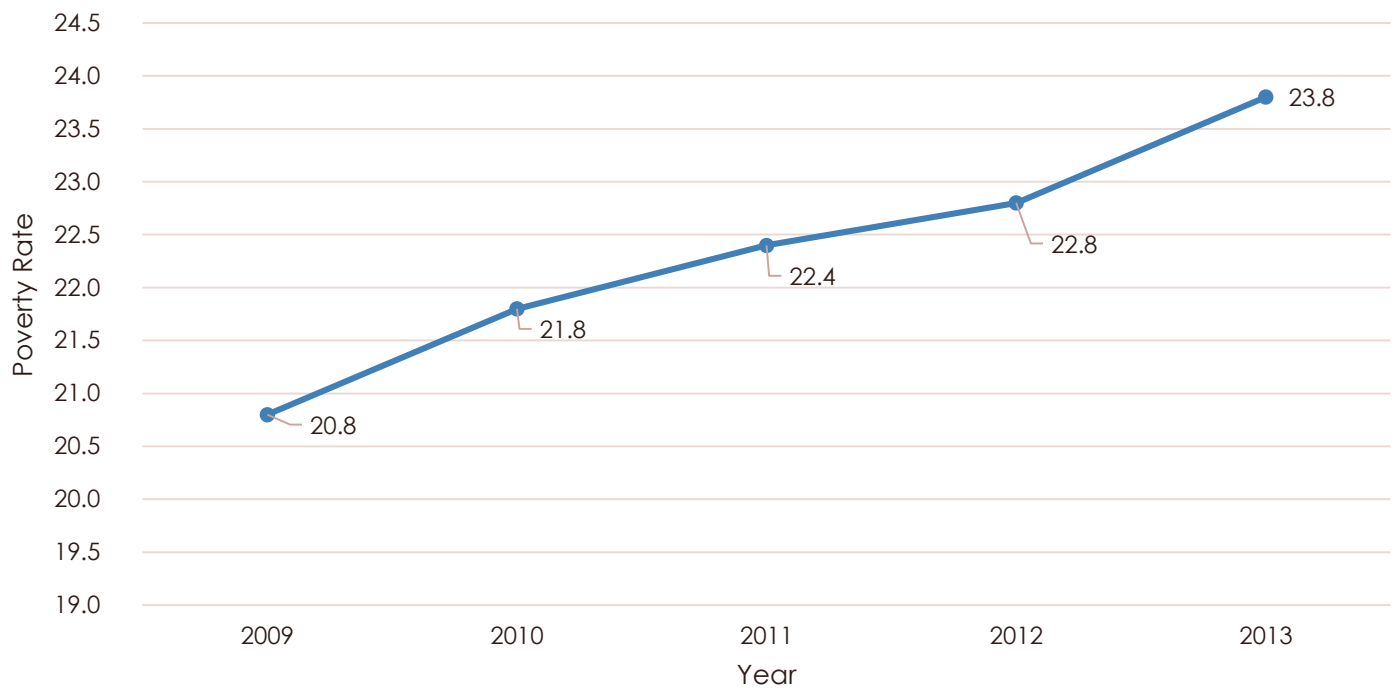
Source: MDES, 2015.

APPENDIX G: MISSISSIPPI LABOR FORCE PARTICIPATION RATE, 2009-2014



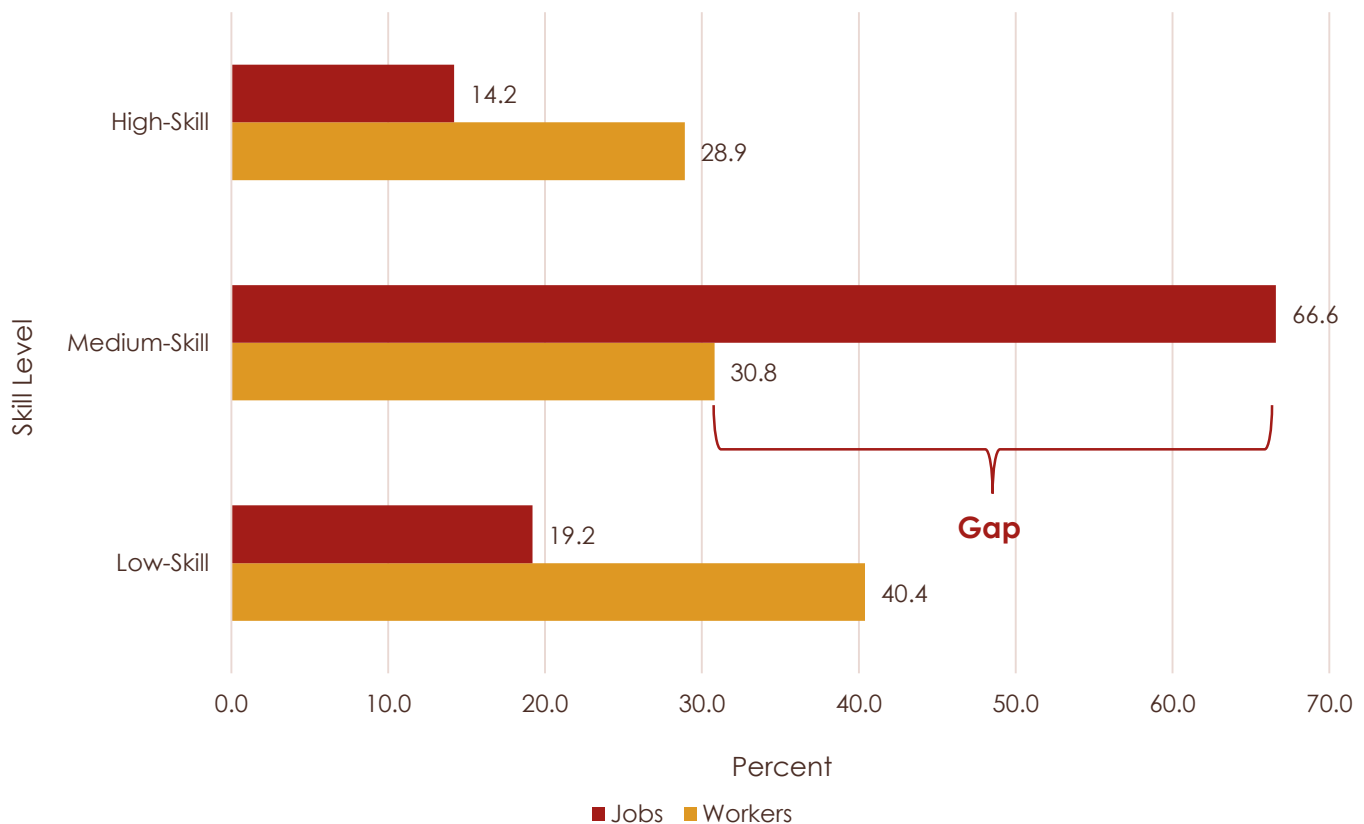
Source: Bureau of Labor Statistics, 2014.

APPENDIX H: PERCENT IN POVERTY, MISSISSIPPI, 2009-2013



Source: U.S. Census Bureau Current Population Survey, 2014.

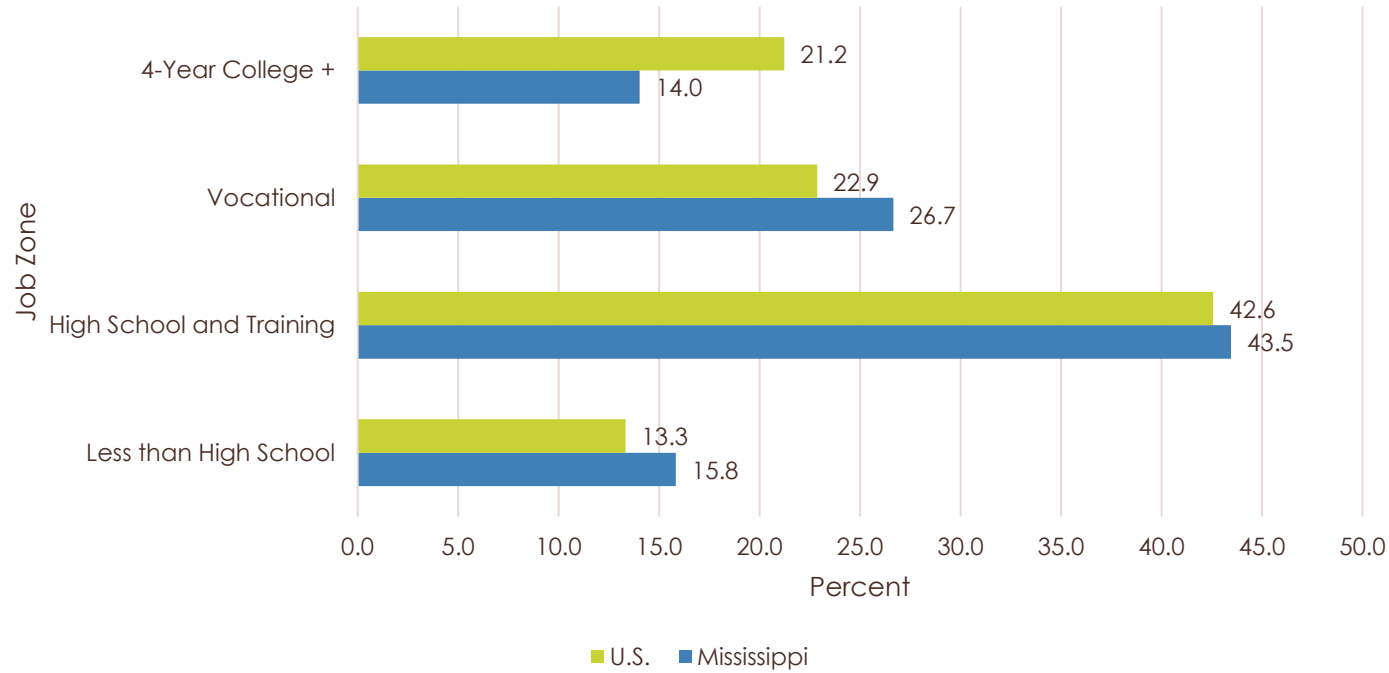
APPENDIX I: MIDDLE-SKILL JOBS



Source: BLS, 2014.

APPENDIX J: MISSISSIPPI VERSUS NATIONAL EDUCATION LEVELS

Percent of Jobs by Job Zone: State vs. Nation



Source: BLS, 2014.

APPENDIX K: MANUFACTURING JOB POSTINGS¹

OSOC CODE	Description	Job Openings	Median Hourly Earnings	Education_Level
Management Occupations		92	\$28.84	
113051	Industrial Production Managers	45	\$37.05	Bachelor's degree
111021	General and Operations Managers	38	\$39.67	Bachelor's degree
119013	Farmers, Ranchers, and Other Agricultural Managers	4	\$18.97	High school diploma or equivalent
119051	Food Service Managers	4	\$22.42	High school diploma or equivalent
112031	Public Relations and Fundraising Managers	1	\$33.58	Bachelor's degree
113011	Administrative Services Managers	1	\$26.08	Bachelor's degree
Business/Financial Occupations		13	\$26.09	
131022	Wholesale and Retail Buyers, Except Farm Products	10	\$27.15	High school diploma or equivalent
131031	Claims Adjusters, Examiners, and Investigators	1	\$28.68	High school diploma or equivalent
131199	Business Operations Specialists, All Other	1	\$29.54	High school diploma or equivalent
132081	Tax Examiners and Collectors, and Revenue Agents	1	\$18.98	Bachelor's degree
Computer/Mathematical Occupations		5	\$18.57	
151151	Computer User Support Specialists	5	\$18.57	Some college, no degree
Engineering Occupations		151	\$23.50	
173026	Industrial Engineering Technicians	47	\$22.24	Associate's degree
173023	Electrical and Electronics Engineering Technicians	35	\$26.32	Associate's degree
173024	Electro-Mechanical Technicians	26	\$25.91	Associate's degree
173029	Engineering Technicians, Except Drafters, All Other	20	\$27.16	Associate's degree
173013	Mechanical Drafters	10	\$22.76	Associate's degree
173027	Mechanical Engineering Technicians	9	\$25.05	Associate's degree
173012	Electrical and Electronics Drafters	2	\$25.12	Associate's degree
173011	Architectural and Civil Drafters	1	\$20.67	Associate's degree
173022	Civil Engineering Technicians	1	\$16.28	Associate's degree
Life/Physical/Social Science Occupations		12	\$18.31	
194031	Chemical Technicians	12	\$18.31	Associate's degree
Art and Media Occupations		3	\$15.74	
274011	Audio and Video Equipment Technicians	1	\$15.65	Postsecondary non-degree award
274014	Sound Engineering Technicians	1	\$18.41	Postsecondary non-degree award
274021	Photographers	1	\$13.17	High school diploma or equivalent
Healthcare Occupations		67	\$16.35	
311014	Nursing Assistants	42	\$9.91	Postsecondary non-degree award
319099	Healthcare Support Workers, All Other	10	\$22.63	High school diploma or equivalent
292052	Pharmacy Technicians	4	\$12.65	High school diploma or equivalent
292061	Licensed Practical and Licensed Vocational Nurses	3	\$17.05	Postsecondary non-degree award
292041	Emergency Medical Technicians and Paramedics	2	\$14.11	Postsecondary non-degree award
299012	Occupational Health and Safety Technicians	2	\$18.02	High school diploma or equivalent
291141	Registered Nurses	1	\$27.52	Associate's degree
292055	Surgical Technologists	1	\$15.78	Postsecondary non-degree award
292081	Opticians, Dispensing	1	\$13.21	High school diploma or equivalent
319092	Medical Assistants	1	\$12.65	Postsecondary non-degree award
Food Preparation/Serving Occupations		1	\$12.06	
351012	First-Line Supervisors of Food Preparation and Serving Workers	1	\$12.06	High school diploma or equivalent
Building/Grounds Cleaning/Maintenance Occupations		10	\$15.21	
371012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	6	\$18.86	High school diploma or equivalent
371011	First-Line Supervisors of Housekeeping and Janitorial Workers	3	\$13.99	High school diploma or equivalent
372021	Pest Control Workers	1	\$12.77	High school diploma or equivalent
Sales Occupations		14	\$18.71	
413011	Advertising Sales Agents	8	\$15.55	High school diploma or equivalent
411011	First-Line Supervisors of Retail Sales Workers	4	\$17.02	High school diploma or equivalent
419091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	2	\$23.56	High school diploma or equivalent
Office/Administrative Support Occupations		464	\$14.71	
435061	Production, Planning, and Expediting Clerks	122	\$19.48	High school diploma or equivalent
435071	Shipping, Receiving, and Traffic Clerks	101	\$13.11	High school diploma or equivalent
434051	Customer Service Representatives	68	\$12.83	High school diploma or equivalent
433031	Bookkeeping, Accounting, and Auditing Clerks	33	\$15.31	High school diploma or equivalent
436014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	22	\$13.32	High school diploma or equivalent
434071	File Clerks	20	\$10.94	High school diploma or equivalent
436011	Executive Secretaries and Executive Administrative Assistants	15	\$18.15	High school diploma or equivalent

¹ Job Openings from MDES 2015

439061	Office Clerks, General	14	\$10.63	High school diploma or equivalent
434171	Receptionists and Information Clerks	11	\$11.14	High school diploma or equivalent
434161	Human Resources Assistants, Except Payroll and Timekeeping	10	\$16.99	High school diploma or equivalent
433021	Billing and Posting Clerks	7	\$14.15	High school diploma or equivalent
433051	Payroll and Timekeeping Clerks	7	\$15.77	High school diploma or equivalent
439021	Data Entry Keyers	7	\$11.73	High school diploma or equivalent
435032	Dispatchers, Except Police, Fire, and Ambulance	5	\$15.21	High school diploma or equivalent
433061	Procurement Clerks	4	\$18.37	High school diploma or equivalent
434121	Library Assistants, Clerical	3	\$9.42	High school diploma or equivalent
439011	Computer Operators	3	\$16.34	High school diploma or equivalent
431011	First-Line Supervisors of Office and Administrative Support Workers	2	\$20.59	High school diploma or equivalent
432011	Switchboard Operators, Including Answering Service	2	\$11.80	High school diploma or equivalent
433011	Bill and Account Collectors	2	\$13.85	High school diploma or equivalent
435111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	2	\$13.17	High school diploma or equivalent
434141	New Accounts Clerks	1	\$13.57	High school diploma or equivalent
434151	Order Clerks	1	\$13.27	High school diploma or equivalent
435051	Postal Service Clerks	1	\$25.68	High school diploma or equivalent
439071	Office Machine Operators, Except Computer	1	\$12.89	High school diploma or equivalent
Farming/Fishing/Forestry Occupations		58	\$20.26	
454011	Forest and Conservation Workers	40	\$18.45	High school diploma or equivalent
451011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	18	\$22.07	High school diploma or equivalent
Construction Occupations		916	\$19.00	
472111	Electricians	335	\$21.50	High school diploma or equivalent
472152	Plumbers, Pipefitters, and Steamfitters	237	\$18.48	High school diploma or equivalent
472211	Sheet Metal Workers	74	\$17.37	High school diploma or equivalent
473015	Helpers--Pipefitters, Plumbers, Pipefitters, and Steamfitters	72	\$11.65	High school diploma or equivalent
472221	Structural Iron and Steel Workers	59	\$19.83	High school diploma or equivalent
474099	Construction and Related Workers, All Other	24	\$29.82	High school diploma or equivalent
472171	Reinforcing Iron and Rebar Workers	19	\$17.07	High school diploma or equivalent
473013	Helpers--Electricians	18	\$12.20	High school diploma or equivalent
472011	Boilermakers	17	\$21.88	High school diploma or equivalent
472031	Carpenters	17	\$16.44	High school diploma or equivalent
472071	Paving, Surfacing, and Tamping Equipment Operators	17	\$13.59	High school diploma or equivalent
472132	Insulation Workers, Mechanical	10	\$15.91	High school diploma or equivalent
475031	Explosives Workers, Ordnance Handling Experts, and Blasters	7	\$32.27	High school diploma or equivalent
472073	Operating Engineers and Other Construction Equipment Operators	4	\$16.12	High school diploma or equivalent
471011	First-Line Supervisors of Construction Trades and Extraction Workers	3	\$24.24	High school diploma or equivalent
474011	Construction and Building Inspectors	2	\$21.40	High school diploma or equivalent
Installation/Maintenance/Repair Occupations		1,032	\$19.53	
499071	Maintenance and Repair Workers, General	249	\$13.40	High school diploma or equivalent
499043	Maintenance Workers, Machinery	160	\$18.83	High school diploma or equivalent
499041	Industrial Machinery Mechanics	134	\$22.43	High school diploma or equivalent
492094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	115	\$19.00	Postsecondary non-degree award
499099	Installation, Maintenance, and Repair Workers, All Other	104	\$20.94	High school diploma or equivalent
499096	Riggers	70	\$30.03	High school diploma or equivalent
493031	Bus and Truck Mechanics and Diesel Engine Specialists	41	\$16.99	High school diploma or equivalent
499098	Helpers--Installation, Maintenance, and Repair Workers	33	\$11.93	High school diploma or equivalent
491011	First-Line Supervisors of Mechanics, Installers, and Repairers	30	\$25.46	High school diploma or equivalent
493023	Automotive Service Technicians and Mechanics	28	\$15.25	High school diploma or equivalent
493042	Mobile Heavy Equipment Mechanics, Except Engines	22	\$18.97	High school diploma or equivalent
499044	Millwrights	14	\$20.58	High school diploma or equivalent
499021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	6	\$16.89	Postsecondary non-degree award
493021	Automotive Body and Related Repairers	5	\$15.09	High school diploma or equivalent
499052	Telecommunications Line Installers and Repairers	4	\$19.38	High school diploma or equivalent
492093	Electrical and Electronics Installers and Repairers, Transportation Equipment	3	\$25.43	Postsecondary non-degree award
493041	Farm Equipment Mechanics and Service Technicians	3	\$16.17	High school diploma or equivalent
493053	Outdoor Power Equipment and Other Small Engine Mechanics	3	\$13.78	High school diploma or equivalent
493011	Aircraft Mechanics and Service Technicians	2	\$24.63	Postsecondary non-degree award
493091	Bicycle Repairers	2	\$14.88	High school diploma or equivalent
492096	Electronic Equipment Installers and Repairers, Motor Vehicles	1	\$15.62	Postsecondary non-degree award
493051	Motorboat Mechanics and Service Technicians	1	\$19.13	High school diploma or equivalent
499012	Control and Valve Installers and Repairers, Except Mechanical Door	1	\$17.31	High school diploma or equivalent
499081	Wind Turbine Service Technicians	1	\$36.61	Some college, no degree
Production Occupations		6,220	\$16.93	
514121	Welders, Cutters, Solderers, and Brazers	1,599	\$18.72	High school diploma or equivalent
512041	Structural Metal Fabricators and Fitters	747	\$17.42	High school diploma or equivalent
516093	Upholsterers	589	\$15.60	High school diploma or equivalent
512092	Team Assemblers	554	\$13.83	High school diploma or equivalent
517041	Sawing Machine Setters, Operators, and Tenders, Wood	378	\$11.73	High school diploma or equivalent
514041	Machinists	361	\$18.90	High school diploma or equivalent
511011	First-Line Supervisors of Production and Operating Workers	296	\$22.23	Postsecondary non-degree award
514022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	266	\$16.83	High school diploma or equivalent
519061	Inspectors, Testers, Sorters, Samplers, and Weighers	261	\$13.90	High school diploma or equivalent
512022	Electrical and Electronic Equipment Assemblers	189	\$13.73	High school diploma or equivalent
514081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	106	\$14.95	High school diploma or equivalent

519041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	101	\$12.71	High school diploma or equivalent
519191	Adhesive Bonding Machine Operators and Tenders	58	\$13.04	High school diploma or equivalent
519122	Painters, Transportation Equipment	55	\$18.40	High school diploma or equivalent
516063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	53	\$15.84	High school diploma or equivalent
512031	Engine and Other Machine Assemblers	52	\$15.51	High school diploma or equivalent
514122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	46	\$17.14	High school diploma or equivalent
518091	Chemical Plant and System Operators	41	\$23.43	High school diploma or equivalent
519023	Mixing and Blending Machine Setters, Operators, and Tenders	40	\$14.37	High school diploma or equivalent
514192	Layout Workers, Metal and Plastic	37	\$26.40	High school diploma or equivalent
518093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	36	\$37.42	High school diploma or equivalent
519032	Cutting and Slicing Machine Setters, Operators, and Tenders	34	\$11.62	High school diploma or equivalent
519111	Packaging and Filling Machine Operators and Tenders	34	\$11.16	High school diploma or equivalent
519051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	33	\$19.00	High school diploma or equivalent
519196	Paper Goods Machine Setters, Operators, and Tenders	25	\$15.76	High school diploma or equivalent
514021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	23	\$14.66	High school diploma or equivalent
516091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	22	\$20.98	High school diploma or equivalent
519195	Molders, Shapers, and Casters, Except Metal and Plastic	22	\$11.09	High school diploma or equivalent
512021	Coil Winders, Tapers, and Finishers	21	\$16.69	High school diploma or equivalent
512091	Fiberglass Laminators and Fabricators	21	\$14.35	High school diploma or equivalent
514111	Tool and Die Makers	18	\$19.50	High school diploma or equivalent
515112	Printing Press Operators	16	\$12.76	High school diploma or equivalent
514011	Computer-Controlled Machine Tool Operators, Metal and Plastic	15	\$16.76	High school diploma or equivalent
512011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	13	\$27.79	High school diploma or equivalent
519011	Chemical Equipment Operators and Tenders	12	\$22.43	High school diploma or equivalent
514191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	10	\$19.33	High school diploma or equivalent
519021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	10	\$14.31	High school diploma or equivalent
514072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	5	\$11.77	High school diploma or equivalent
516041	Shoe and Leather Workers and Repairers	4	\$22.80	High school diploma or equivalent
518021	Stationary Engineers and Boiler Operators	4	\$14.80	High school diploma or equivalent
514012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	3	\$19.80	High school diploma or equivalent
516062	Textile Cutting Machine Setters, Operators, and Tenders	2	\$11.63	High school diploma or equivalent
514032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1	\$14.54	High school diploma or equivalent
514034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1	\$14.97	High school diploma or equivalent
514071	Foundry Mold and Coremakers	1	\$9.98	High school diploma or equivalent
515113	Print Binding and Finishing Workers	1	\$11.33	High school diploma or equivalent
516092	Fabric and Apparel Patternmakers	1	\$15.55	High school diploma or equivalent
518013	Power Plant Operators	1	\$29.11	High school diploma or equivalent
519012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	1	\$19.02	High school diploma or equivalent
519151	Photographic Process Workers and Processing Machine Operators	1	\$10.98	High school diploma or equivalent
Transportation/Material Moving Occupations		564	\$21.73	
533032	Heavy and Tractor-Trailer Truck Drivers	440	\$17.35	Postsecondary non-degree award
533033	Light Truck or Delivery Services Drivers	53	\$12.63	High school diploma or equivalent
531021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	31	\$21.68	High school diploma or equivalent
535031	Ship Engineers	28	\$30.90	Bachelor's degree
537021	Crane and Tower Operators	10	\$18.63	High school diploma or equivalent
532012	Commercial Pilots	1	\$35.53	High school diploma or equivalent
537032	Excavating and Loading Machine and Dragline Operators	1	\$15.40	High school diploma or equivalent

APPENDIX K: HEALTHCARE JOB POSTINGS²

OSOC CODE	Description	Job Openings	Median Hourly Earnings	Education_Level
Management Occupations		80	\$29.39	
119051	Food Service Managers	50	\$22.42	High school diploma or equivalent
111021	General and Operations Managers	15	\$39.67	Bachelor's degree
113011	Administrative Services Managers	15	\$26.08	Bachelor's degree
Business/Financial Occupations		32	\$23.03	
131199	Business Operations Specialists, All Other	27	\$29.54	High school diploma or equivalent
131022	Wholesale and Retail Buyers, Except Farm Products	4	\$27.15	High school diploma or equivalent
132082	Tax Preparers	1	\$12.40	High school diploma or equivalent
Computer/Mathematical Occupations		18	\$18.57	
151151	Computer User Support Specialists	18	\$18.57	Some college, no degree
Life/Physical/Social Science Occupations		3	\$17.44	
194099	Life, Physical, and Social Science Technicians, All Other	3	\$17.44	Associate's degree
Education/Training Occupations		154	\$12.01	
252011	Preschool Teachers, Except Special Education	107	\$11.71	Associate's degree
259041	Teacher Assistants	44	\$8.74	Some college, no degree
253021	Self-Enrichment Education Teachers	3	\$15.59	High school diploma or equivalent
Healthcare Occupations		4,331	\$17.86	
311014	Nursing Assistants	1,698	\$9.91	Postsecondary non-degree award
291141	Registered Nurses	1,149	\$27.52	Associate's degree
292061	Licensed Practical and Licensed Vocational Nurses	404	\$17.05	Postsecondary non-degree award
319099	Healthcare Support Workers, All Other	266	\$22.63	High school diploma or equivalent
292099	Health Technologists and Technicians, All Other	103	\$29.09	High school diploma or equivalent
319092	Medical Assistants	85	\$12.65	Postsecondary non-degree award
292041	Emergency Medical Technicians and Paramedics	81	\$14.11	Postsecondary non-degree award
292055	Surgical Technologists	59	\$15.78	Postsecondary non-degree award
292034	Radiologic Technologists	58	\$21.47	Associate's degree
292012	Medical and Clinical Laboratory Technicians	54	\$16.67	Associate's degree
292071	Medical Records and Health Information Technicians	54	\$13.10	Postsecondary non-degree award
291126	Respiratory Therapists	53	\$23.37	Associate's degree
292053	Psychiatric Technicians	49	\$12.07	Postsecondary non-degree award
292052	Pharmacy Technicians	32	\$12.65	High school diploma or equivalent
319091	Dental Assistants	31	\$15.02	Postsecondary non-degree award
319097	Phlebotomists	30	\$11.79	Postsecondary non-degree award
311013	Psychiatric Aides	21	\$10.10	High school diploma or equivalent
292032	Diagnostic Medical Sonographers	16	\$26.50	Associate's degree
292031	Cardiovascular Technologists and Technicians	14	\$19.39	Associate's degree
292051	Dietetic Technicians	11	\$9.21	Associate's degree
312021	Physical Therapist Assistants	11	\$21.16	Associate's degree
312011	Occupational Therapy Assistants	10	\$21.29	Associate's degree
319096	Veterinary Assistants and Laboratory Animal Caretakers	8	\$10.37	High school diploma or equivalent
292033	Nuclear Medicine Technologists	6	\$29.80	Associate's degree
292057	Ophthalmic Medical Technicians	6	\$15.54	Postsecondary non-degree award
292021	Dental Hygienists	5	\$25.23	Associate's degree
319094	Medical Transcriptionists	5	\$14.83	Postsecondary non-degree award
291124	Radiation Therapists	4	\$36.05	Associate's degree
312012	Occupational Therapy Aides	3	\$17.44	High school diploma or equivalent
292081	Opticians, Dispensing	2	\$13.21	High school diploma or equivalent
312022	Physical Therapist Aides	1	\$11.07	High school diploma or equivalent
319011	Massage Therapists	1	\$19.99	Postsecondary non-degree award
319093	Medical Equipment Preparers	1	\$13.21	High school diploma or equivalent
Protective Service Occupations		38	\$17.36	
339032	Security Guards	30	\$10.06	High school diploma or equivalent
333051	Police and Sheriff's Patrol Officers	3	\$15.56	High school diploma or equivalent
333012	Correctional Officers and Jailers	2	\$13.00	High school diploma or equivalent
331012	First-Line Supervisors of Police and Detectives	1	\$24.54	High school diploma or equivalent
332021	Fire Inspectors and Investigators	1	\$26.92	High school diploma or equivalent
339011	Animal Control Workers	1	\$14.08	High school diploma or equivalent
Food Preparation/Serving Occupations		5	\$21.41	
351011	Chefs and Head Cooks	5	\$21.41	High school diploma or equivalent
Building/Grounds Cleaning/Maintenance Occupations		3	\$13.99	
371011	First-Line Supervisors of Housekeeping and Janitorial Workers	3	\$13.99	High school diploma or equivalent

² Job Openings from MDES 2015

Personal Care/Service Occupations		115	\$10.92	
399011	Childcare Workers	106	\$8.69	High school diploma or equivalent
399041	Residential Advisors	8	\$10.13	High school diploma or equivalent
399031	Fitness Trainers and Aerobics Instructors	1	\$13.93	High school diploma or equivalent
Sales Occupations		1	\$15.51	
419011	Demonstrators and Product Promoters	1	\$15.51	High school diploma or equivalent
Office/Administrative Support Occupations		558	\$14.47	
439061	Office Clerks, General	120	\$10.63	High school diploma or equivalent
434051	Customer Service Representatives	73	\$12.83	High school diploma or equivalent
434171	Receptionists and Information Clerks	70	\$11.14	High school diploma or equivalent
436013	Medical Secretaries	70	\$13.74	High school diploma or equivalent
436014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	47	\$13.32	High school diploma or equivalent
436011	Executive Secretaries and Executive Administrative Assistants	24	\$18.15	High school diploma or equivalent
435021	Couriers and Messengers	22	\$9.99	High school diploma or equivalent
433031	Bookkeeping, Accounting, and Auditing Clerks	21	\$15.31	High school diploma or equivalent
439041	Insurance Claims and Policy Processing Clerks	17	\$15.02	High school diploma or equivalent
433021	Billing and Posting Clerks	14	\$14.15	High school diploma or equivalent
431011	First-Line Supervisors of Office and Administrative Support Workers	10	\$20.59	High school diploma or equivalent
434071	File Clerks	9	\$10.94	High school diploma or equivalent
435071	Shipping, Receiving, and Traffic Clerks	9	\$13.11	High school diploma or equivalent
434061	Eligibility Interviewers, Government Programs	6	\$15.30	High school diploma or equivalent
434199	Information and Record Clerks, All Other	6	\$19.07	High school diploma or equivalent
439021	Data Entry Keyers	6	\$11.73	High school diploma or equivalent
433011	Bill and Account Collectors	5	\$13.85	High school diploma or equivalent
435031	Police, Fire, and Ambulance Dispatchers	4	\$11.60	High school diploma or equivalent
435051	Postal Service Clerks	4	\$25.68	High school diploma or equivalent
432011	Switchboard Operators, Including Answering Service	3	\$11.80	High school diploma or equivalent
433051	Payroll and Timekeeping Clerks	3	\$15.77	High school diploma or equivalent
433061	Procurement Clerks	2	\$18.37	High school diploma or equivalent
434021	Correspondence Clerks	2	\$18.40	High school diploma or equivalent
434161	Human Resources Assistants, Except Payroll and Timekeeping	2	\$16.99	High school diploma or equivalent
435061	Production, Planning, and Expediting Clerks	2	\$19.48	High school diploma or equivalent
439022	Word Processors and Typists	2	\$12.94	High school diploma or equivalent
432021	Telephone Operators	1	\$10.47	High school diploma or equivalent
434031	Court, Municipal, and License Clerks	1	\$14.06	High school diploma or equivalent
434121	Library Assistants, Clerical	1	\$9.42	High school diploma or equivalent
434151	Order Clerks	1	\$13.27	High school diploma or equivalent
435041	Meter Readers, Utilities	1	\$11.44	High school diploma or equivalent
Construction Occupations		22	\$17.42	
474041	Hazardous Materials Removal Workers	9	\$13.24	High school diploma or equivalent
472031	Carpenters	7	\$16.44	High school diploma or equivalent
472043	Floor Sanders and Finishers	3	\$14.98	High school diploma or equivalent
472111	Electricians	2	\$21.50	High school diploma or equivalent
472152	Plumbers, Pipefitters, and Steamfitters	1	\$18.48	High school diploma or equivalent
Installation/Maintenance/Repair Occupations		53	\$16.92	
499071	Maintenance and Repair Workers, General	31	\$13.40	High school diploma or equivalent
499062	Medical Equipment Repairers	8	\$21.16	Associate's degree
499043	Maintenance Workers, Machinery	5	\$18.83	High school diploma or equivalent
499021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4	\$16.89	Postsecondary non-degree award
493031	Bus and Truck Mechanics and Diesel Engine Specialists	2	\$16.99	High school diploma or equivalent
493023	Automotive Service Technicians and Mechanics	1	\$15.25	High school diploma or equivalent
499098	Helpers—Installation, Maintenance, and Repair Workers	1	\$11.93	High school diploma or equivalent
499099	Installation, Maintenance, and Repair Workers, All Other	1	\$20.94	High school diploma or equivalent
Production Occupations		16	\$18.67	
517041	Sawing Machine Setters, Operators, and Tenders, Wood	6	\$11.73	High school diploma or equivalent
511011	First-Line Supervisors of Production and Operating Workers	3	\$22.23	Postsecondary non-degree award
518021	Stationary Engineers and Boiler Operators	3	\$14.80	High school diploma or equivalent
519061	Inspectors, Testers, Sorters, Samplers, and Weighers	2	\$13.90	High school diploma or equivalent
518099	Plant and System Operators, All Other	1	\$32.19	High school diploma or equivalent
519081	Dental Laboratory Technicians	1	\$17.14	High school diploma or equivalent
Transportation/Material Moving Occupations		147	\$16.92	
533022	Bus Drivers, School or Special Client	90	\$9.10	High school diploma or equivalent
533021	Bus Drivers, Transit and Intercity	23	\$12.96	High school diploma or equivalent
533033	Light Truck or Delivery Services Drivers	11	\$12.63	High school diploma or equivalent
531021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	10	\$21.68	High school diploma or equivalent
532012	Commercial Pilots	8	\$35.53	High school diploma or equivalent
533011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	4	\$9.17	High school diploma or equivalent
533032	Heavy and Tractor-Trailer Truck Drivers	1	\$17.35	Postsecondary non-degree award

APPENDIX K: WHOLESALE/RETAIL JOB POSTINGS³

OSOC CODE	Description	Job Openings	Median Hourly Earnings	Education_Level
Management Occupations		114	\$28.84	
119051	Food Service Managers	43	\$22.42	High school diploma or equivalent
111021	General and Operations Managers	35	\$39.67	Bachelor's degree
113011	Administrative Services Managers	30	\$26.08	Bachelor's degree
119013	Farmers, Ranchers, and Other Agricultural Managers	5	\$18.97	High school diploma or equivalent
113051	Industrial Production Managers	1	\$37.05	Bachelor's degree
Business/Financial Occupations		2	\$28.35	
131022	Wholesale and Retail Buyers, Except Farm Products	1	\$27.15	High school diploma or equivalent
131199	Business Operations Specialists, All Other	1	\$29.54	High school diploma or equivalent
Computer/Mathematical Occupations		2	\$18.57	
151151	Computer User Support Specialists	2	\$18.57	Some college, no degree
Engineering Occupations		8	\$24.31	
173023	Electrical and Electronics Engineering Technicians	4	\$26.32	Associate's degree
173024	Electro-Mechanical Technicians	2	\$25.91	Associate's degree
173013	Mechanical Drafters	1	\$22.76	Associate's degree
173026	Industrial Engineering Technicians	1	\$22.24	Associate's degree
Art and Media Occupations		105	\$13.90	
271026	Merchandise Displayers and Window Trimmers	102	\$16.20	High school diploma or equivalent
271023	Floral Designers	3	\$11.59	High school diploma or equivalent
Healthcare Occupations		40	\$18.22	
292052	Pharmacy Technicians	18	\$12.65	High school diploma or equivalent
311014	Nursing Assistants	13	\$9.91	Postsecondary non-degree award
291141	Registered Nurses	2	\$27.52	Associate's degree
319095	Pharmacy Aides	2	\$12.99	High school diploma or equivalent
291126	Respiratory Therapists	1	\$23.37	Associate's degree
292021	Dental Hygienists	1	\$25.23	Associate's degree
292061	Licensed Practical and Licensed Vocational Nurses	1	\$17.05	Postsecondary non-degree award
319092	Medical Assistants	1	\$12.65	Postsecondary non-degree award
319099	Healthcare Support Workers, All Other	1	\$22.63	High school diploma or equivalent
Personal Care/Service Occupations		13	\$13.12	
399011	Childcare Workers	7	\$8.69	High school diploma or equivalent
395012	Hairdressers, Hairstylists, and Cosmetologists	3	\$12.00	Postsecondary non-degree award
391021	First-Line Supervisors of Personal Service Workers	2	\$14.53	High school diploma or equivalent
397012	Travel Guides	1	\$17.27	High school diploma or equivalent
Sales Occupations		319	\$16.27	
411011	First-Line Supervisors of Retail Sales Workers	318	\$17.02	High school diploma or equivalent
419011	Demonstrators and Product Promoters	1	\$15.51	High school diploma or equivalent
Office/Administrative Support Occupations		695	\$15.15	
434051	Customer Service Representatives	466	\$12.83	High school diploma or equivalent
435071	Shipping, Receiving, and Traffic Clerks	72	\$13.11	High school diploma or equivalent
435041	Meter Readers, Utilities	51	\$11.44	High school diploma or equivalent
433031	Bookkeeping, Accounting, and Auditing Clerks	23	\$15.31	High school diploma or equivalent
439199	Office and Administrative Support Workers, All Other	16	\$20.40	High school diploma or equivalent
436014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	14	\$13.32	High school diploma or equivalent
434151	Order Clerks	12	\$13.27	High school diploma or equivalent
434171	Receptionists and Information Clerks	11	\$11.14	High school diploma or equivalent
439061	Office Clerks, General	11	\$10.63	High school diploma or equivalent
433021	Billing and Posting Clerks	5	\$14.15	High school diploma or equivalent
435061	Production, Planning, and Expediting Clerks	5	\$19.48	High school diploma or equivalent
433011	Bill and Account Collectors	2	\$13.85	High school diploma or equivalent
435032	Dispatchers, Except Police, Fire, and Ambulance	2	\$15.21	High school diploma or equivalent
431011	First-Line Supervisors of Office and Administrative Support Workers	1	\$20.59	High school diploma or equivalent
434021	Correspondence Clerks	1	\$18.40	High school diploma or equivalent
436011	Executive Secretaries and Executive Administrative Assistants	1	\$18.15	High school diploma or equivalent
439011	Computer Operators	1	\$16.34	High school diploma or equivalent
439041	Insurance Claims and Policy Processing Clerks	1	\$15.02	High school diploma or equivalent
Farming/Fishing/Forestry Occupations		5	\$20.83	
451011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	3	\$22.07	High school diploma or equivalent
452011	Agricultural Inspectors	2	\$19.58	Bachelor's degree

³ Job Openings from MDES 2015

Construction Occupations		13	\$19.49	
472111	Electricians	6	\$21.50	High school diploma or equivalent
472031	Carpenters	2	\$16.44	High school diploma or equivalent
474099	Construction and Related Workers, All Other	2	\$29.82	High school diploma or equivalent
472073	Operating Engineers and Other Construction Equipment Operators	1	\$16.12	High school diploma or equivalent
472221	Structural Iron and Steel Workers	1	\$19.83	High school diploma or equivalent
474041	Hazardous Materials Removal Workers	1	\$13.24	High school diploma or equivalent
Installation/Maintenance/Repair Occupations		235	\$18.43	
499099	Installation, Maintenance, and Repair Workers, All Other	79	\$20.94	High school diploma or equivalent
493023	Automotive Service Technicians and Mechanics	41	\$15.25	High school diploma or equivalent
499071	Maintenance and Repair Workers, General	31	\$13.40	High school diploma or equivalent
492022	Telecommunications Equipment Installers and Repairers, Except Line Installers	26	\$30.27	Postsecondary non-degree award
493031	Bus and Truck Mechanics and Diesel Engine Specialists	12	\$16.99	High school diploma or equivalent
493021	Automotive Body and Related Repairers	10	\$15.09	High school diploma or equivalent
493041	Farm Equipment Mechanics and Service Technicians	7	\$16.17	High school diploma or equivalent
499021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	5	\$16.89	Postsecondary non-degree award
492092	Electric Motor, Power Tool, and Related Repairers	4	\$19.33	Postsecondary non-degree award
492011	Computer, Automated Teller, and Office Machine Repairers	3	\$15.88	Some college, no degree
493022	Automotive Glass Installers and Repairers	2	\$14.80	High school diploma or equivalent
493092	Recreational Vehicle Service Technicians	2	\$15.64	High school diploma or equivalent
499041	Industrial Machinery Mechanics	2	\$22.43	High school diploma or equivalent
499091	Coin, Vending, and Amusement Machine Servicers and Repairers	2	\$14.40	High school diploma or equivalent
499092	Commercial Divers	2	\$22.65	Postsecondary non-degree award
491011	First-Line Supervisors of Mechanics, Installers, and Repairers	1	\$25.46	High school diploma or equivalent
492094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	1	\$19.00	Postsecondary non-degree award
492097	Electronic Home Entertainment Equipment Installers and Repairers	1	\$18.22	Postsecondary non-degree award
493042	Mobile Heavy Equipment Mechanics, Except Engines	1	\$18.97	High school diploma or equivalent
493051	Motorboat Mechanics and Service Technicians	1	\$19.13	High school diploma or equivalent
493052	Motorcycle Mechanics	1	\$16.20	High school diploma or equivalent
499031	Home Appliance Repairers	1	\$18.43	High school diploma or equivalent
Production Occupations		74	\$15.76	
519061	Inspectors, Testers, Sorters, Samplers, and Weighers	20	\$13.90	High school diploma or equivalent
511011	First-Line Supervisors of Production and Operating Workers	13	\$22.23	Postsecondary non-degree award
517041	Sawing Machine Setters, Operators, and Tenders, Wood	8	\$11.73	High school diploma or equivalent
514121	Welders, Cutters, Solderers, and Brazers	7	\$18.72	High school diploma or equivalent
517042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	6	\$12.27	High school diploma or equivalent
512022	Electrical and Electronic Equipment Assemblers	5	\$13.73	High school diploma or equivalent
516093	Upholsters	3	\$15.60	High school diploma or equivalent
514023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	2	\$14.66	High school diploma or equivalent
514041	Machinists	2	\$18.90	High school diploma or equivalent
519041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	2	\$12.71	High school diploma or equivalent
514022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$16.83	High school diploma or equivalent
514072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$11.77	High school diploma or equivalent
515112	Printing Press Operators	1	\$12.76	High school diploma or equivalent
516052	Tailors, Dressmakers, and Custom Sewers	1	\$12.14	Less than high school
517011	Cabinetmakers and Bench Carpenters	1	\$11.98	High school diploma or equivalent
518099	Plant and System Operators, All Other	1	\$32.19	High school diploma or equivalent
Transportation/Material Moving Occupations		299	\$18.98	
533032	Heavy and Tractor-Trailer Truck Drivers	166	\$17.35	Postsecondary non-degree award
533033	Light Truck or Delivery Services Drivers	115	\$12.63	High school diploma or equivalent
536051	Transportation Inspectors	5	\$23.45	High school diploma or equivalent
537032	Excavating and Loading Machine and Dragline Operators	5	\$15.40	High school diploma or equivalent
531021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	4	\$21.68	High school diploma or equivalent
531031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	2	\$23.73	High school diploma or equivalent
537021	Crane and Tower Operators	2	\$18.63	High school diploma or equivalent

APPENDIX K: EDUCATION JOB POSTINGS⁴

OSOC CODE	Description	Job Openings	Median Hourly Earnings	Education_Level
Management Occupations		19	\$32.88	
113011	Administrative Services Managers	10	\$26.08	Bachelor's degree
111021	General and Operations Managers	9	\$39.67	Bachelor's degree
Business/Financial Occupations		26	\$29.54	
131199	Business Operations Specialists, All Other	26	\$29.54	High school diploma or equivalent
Computer/Mathematical Occupations		17	\$22.59	
151151	Computer User Support Specialists	10	\$18.57	Some college, no degree
151134	Web Developers	7	\$26.60	Associate's degree
Engineering Occupations		3	\$22.86	
173027	Mechanical Engineering Technicians	2	\$25.05	Associate's degree
173011	Architectural and Civil Drafters	1	\$20.67	Associate's degree
Life/Physical/Social Science Occupations		8	\$16.95	
194011	Agricultural and Food Science Technicians	5	\$13.24	Associate's degree
194093	Forest and Conservation Technicians	2	\$19.31	Associate's degree
194031	Chemical Technicians	1	\$18.31	Associate's degree
Education/Training Occupations		70	\$12.01	
259041	Teacher Assistants	53	\$8.74	Some college, no degree
253021	Self-Enrichment Education Teachers	13	\$15.59	High school diploma or equivalent
252011	Preschool Teachers, Except Special Education	4	\$11.71	Associate's degree
Art and Media Occupations		13	\$21.02	
272021	Athletes and Sports Competitors	3	\$50.51	High school diploma or equivalent
274011	Audio and Video Equipment Technicians	3	\$15.65	Postsecondary non-degree award
274032	Film and Video Editors	3	\$13.85	Bachelor's degree
274021	Photographers	2	\$13.17	High school diploma or equivalent
272023	Umpires, Referees, and Other Sports Officials	1	\$18.91	High school diploma or equivalent
274012	Broadcast Technicians	1	\$14.01	Associate's degree
Healthcare Occupations		57	\$18.11	
319096	Veterinary Assistants and Laboratory Animal Caretakers	32	\$10.37	High school diploma or equivalent
292056	Veterinary Technologists and Technicians	17	\$13.93	Associate's degree
292034	Radiologic Technologists	2	\$21.47	Associate's degree
292061	Licensed Practical and Licensed Vocational Nurses	2	\$17.05	Postsecondary non-degree award
311014	Nursing Assistants	2	\$9.91	Postsecondary non-degree award
291141	Registered Nurses	1	\$27.52	Associate's degree
292032	Diagnostic Medical Sonographers	1	\$26.50	Associate's degree
Protective Service Occupations		27	\$18.50	
333051	Police and Sheriff's Patrol Officers	10	\$15.56	High school diploma or equivalent
333041	Parking Enforcement Workers	7	\$19.28	High school diploma or equivalent
339032	Security Guards	7	\$10.06	High school diploma or equivalent
331012	First-Line Supervisors of Police and Detectives	2	\$24.54	High school diploma or equivalent
333021	Detectives and Criminal Investigators	1	\$23.07	High school diploma or equivalent
Food Preparation/Serving Occupations		41	\$21.41	
351011	Chefs and Head Cooks	41	\$21.41	High school diploma or equivalent
Building/Grounds Cleaning/Maintenance Occupations		4	\$15.82	
371012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	3	\$18.86	High school diploma or equivalent
372021	Pest Control Workers	1	\$12.77	High school diploma or equivalent
Personal Care/Service Occupations		41	\$15.44	
395012	Hairdressers, Hairstylists, and Cosmetologists	16	\$12.00	Postsecondary non-degree award
399041	Residential Advisors	13	\$10.13	High school diploma or equivalent
399011	Childcare Workers	7	\$8.69	High school diploma or equivalent
391021	First-Line Supervisors of Personal Service Workers	3	\$14.53	High school diploma or equivalent
393092	Costume Attendants	1	\$33.35	High school diploma or equivalent
399031	Fitness Trainers and Aerobics Instructors	1	\$13.93	High school diploma or equivalent
Office/Administrative Support Occupations		360	\$14.75	
436014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	113	\$13.32	High school diploma or equivalent
434111	Interviewers, Except Eligibility and Loan	79	\$12.69	High school diploma or equivalent
436011	Executive Secretaries and Executive Administrative Assistants	33	\$18.15	High school diploma or equivalent
434071	File Clerks	26	\$10.94	High school diploma or equivalent
433031	Bookkeeping, Accounting, and Auditing Clerks	23	\$15.31	High school diploma or equivalent
434161	Human Resources Assistants, Except Payroll and Timekeeping	18	\$16.99	High school diploma or equivalent
439061	Office Clerks, General	12	\$10.63	High school diploma or equivalent

⁴ Job Openings from MDES 2015

434171	Receptionists and Information Clerks	9	\$11.14	High school diploma or equivalent
433051	Payroll and Timekeeping Clerks	5	\$15.77	High school diploma or equivalent
434081	Hotel, Motel, and Resort Desk Clerks	5	\$9.00	High school diploma or equivalent
435071	Shipping, Receiving, and Traffic Clerks	5	\$13.11	High school diploma or equivalent
439021	Data Entry Keyers	5	\$11.73	High school diploma or equivalent
433061	Procurement Clerks	4	\$18.37	High school diploma or equivalent
434121	Library Assistants, Clerical	4	\$9.42	High school diploma or equivalent
434051	Customer Service Representatives	3	\$12.83	High school diploma or equivalent
433011	Bill and Account Collectors	2	\$13.85	High school diploma or equivalent
433099	Financial Clerks, All Other	2	\$15.24	High school diploma or equivalent
436013	Medical Secretaries	2	\$13.74	High school diploma or equivalent
439022	Word Processors and Typists	2	\$12.94	High school diploma or equivalent
439051	Mail Clerks and Mail Machine Operators, Except Postal Service	2	\$12.60	High school diploma or equivalent
431011	First-Line Supervisors of Office and Administrative Support Workers	1	\$20.59	High school diploma or equivalent
435031	Police, Fire, and Ambulance Dispatchers	1	\$11.60	High school diploma or equivalent
435032	Dispatchers, Except Police, Fire, and Ambulance	1	\$15.21	High school diploma or equivalent
435081	Stock Clerks and Order Fillers	1	\$9.97	Less than high school
439011	Computer Operators	1	\$16.34	High school diploma or equivalent
439111	Statistical Assistants	1	\$42.00	Bachelor's degree
Construction Occupations		18	\$17.81	
472031	Carpenters	5	\$16.44	High school diploma or equivalent
472111	Electricians	4	\$21.50	High school diploma or equivalent
472152	Plumbers, Pipefitters, and Steamfitters	2	\$18.48	High school diploma or equivalent
473013	Helpers--Electricians	2	\$12.20	High school diploma or equivalent
473015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	2	\$11.65	High school diploma or equivalent
471011	First-Line Supervisors of Construction Trades and Extraction Workers	1	\$24.24	High school diploma or equivalent
472011	Boilermakers	1	\$21.88	High school diploma or equivalent
472073	Operating Engineers and Other Construction Equipment Operators	1	\$16.12	High school diploma or equivalent
Installation/Maintenance/Repair Occupations		39	\$19.23	
499071	Maintenance and Repair Workers, General	18	\$13.40	High school diploma or equivalent
493031	Bus and Truck Mechanics and Diesel Engine Specialists	3	\$16.99	High school diploma or equivalent
499021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	3	\$16.89	Postsecondary non-degree award
499052	Telecommunications Line Installers and Repairers	3	\$19.38	High school diploma or equivalent
499041	Industrial Machinery Mechanics	2	\$22.43	High school diploma or equivalent
499051	Electrical Power-Line Installers and Repairers	2	\$26.66	High school diploma or equivalent
499094	Locksmiths and Safe Repairers	2	\$15.48	High school diploma or equivalent
491011	First-Line Supervisors of Mechanics, Installers, and Repairers	1	\$25.46	High school diploma or equivalent
492022	Telecommunications Equipment Installers and Repairers, Except Line Installers	1	\$30.27	Postsecondary non-degree award
492098	Security and Fire Alarm Systems Installers	1	\$14.49	High school diploma or equivalent
493023	Automotive Service Technicians and Mechanics	1	\$15.25	High school diploma or equivalent
493091	Bicycle Repairers	1	\$14.88	High school diploma or equivalent
499061	Camera and Photographic Equipment Repairers	1	\$18.39	Associate's degree
Production Occupations		4	\$17.36	
512041	Structural Metal Fabricators and Fitters	2	\$17.42	High school diploma or equivalent
514041	Machinists	1	\$18.90	High school diploma or equivalent
519196	Paper Goods Machine Setters, Operators, and Tenders	1	\$15.76	High school diploma or equivalent
Transportation/Material Moving Occupations		36	\$15.27	
533021	Bus Drivers, Transit and Intercity	15	\$12.96	High school diploma or equivalent
533022	Bus Drivers, School or Special Client	12	\$9.10	High school diploma or equivalent
533032	Heavy and Tractor-Trailer Truck Drivers	7	\$17.35	Postsecondary non-degree award
531021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	2	\$21.68	High school diploma or equivalent

APPENDIX K:

ACCOMMODATION/LEISURE JOB POSTINGS⁵

OSOC CODE	Description	Job Openings	Median Hourly Earnings	Education_Level
Management Occupations		272	\$26.73	
119051	Food Service Managers	210	\$22.42	High school diploma or equivalent
111021	General and Operations Managers	38	\$39.67	Bachelor's degree
119081	Lodging Managers	23	\$18.74	High school diploma or equivalent
113011	Administrative Services Managers	1	\$26.08	Bachelor's degree
Business/Financial Occupations		6	\$25.22	
131199	Business Operations Specialists, All Other	4	\$29.54	High school diploma or equivalent
131022	Wholesale and Retail Buyers, Except Farm Products	1	\$27.15	High school diploma or equivalent
132081	Tax Examiners and Collectors, and Revenue Agents	1	\$18.98	Bachelor's degree
Protective Service Occupations		16	\$12.61	
339032	Security Guards	12	\$10.06	High school diploma or equivalent
339031	Gaming Surveillance Officers and Gaming Investigators	4	\$15.16	High school diploma or equivalent
Food Preparation/Serving Occupations		126	\$16.74	
351012	First-Line Supervisors of Food Preparation and Serving Workers	117	\$12.06	High school diploma or equivalent
351011	Chefs and Head Cooks	9	\$21.41	High school diploma or equivalent
Building/Grounds Cleaning/Maintenance Occupations		29	\$16.43	
371011	First-Line Supervisors of Housekeeping and Janitorial Workers	25	\$13.99	High school diploma or equivalent
371012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	4	\$18.86	High school diploma or equivalent
Personal Care/Service Occupations		28	\$14.09	
393011	Gaming Dealers	14	\$8.67	High school diploma or equivalent
391011	Gaming Supervisors	6	\$20.47	High school diploma or equivalent
399031	Fitness Trainers and Aerobics Instructors	4	\$13.93	High school diploma or equivalent
396011	Baggage Porters and Bellhops	3	\$9.86	High school diploma or equivalent
395094	Skincare Specialists	1	\$17.53	Postsecondary non-degree award
Sales Occupations		61	\$13.51	
419011	Demonstrators and Product Promoters	55	\$15.51	High school diploma or equivalent
412012	Gaming Change Persons and Booth Cashiers	6	\$11.50	High school diploma or equivalent
Office/Administrative Support Occupations		469	\$13.73	
434081	Hotel, Motel, and Resort Desk Clerks	417	\$9.00	High school diploma or equivalent
436011	Executive Secretaries and Executive Administrative Assistants	13	\$18.15	High school diploma or equivalent
434051	Customer Service Representatives	11	\$12.83	High school diploma or equivalent
433041	Gaming Cage Workers	8	\$12.09	High school diploma or equivalent
434161	Human Resources Assistants, Except Payroll and Timekeeping	4	\$16.99	High school diploma or equivalent
439061	Office Clerks, General	4	\$10.63	High school diploma or equivalent
433031	Bookkeeping, Accounting, and Auditing Clerks	3	\$15.31	High school diploma or equivalent
431011	First-Line Supervisors of Office and Administrative Support Workers	2	\$20.59	High school diploma or equivalent
436014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	2	\$13.32	High school diploma or equivalent
432021	Telephone Operators	1	\$10.47	High school diploma or equivalent
433071	Tellers	1	\$11.31	High school diploma or equivalent
434071	File Clerks	1	\$10.94	High school diploma or equivalent
434171	Receptionists and Information Clerks	1	\$11.14	High school diploma or equivalent
435061	Production, Planning, and Expediting Clerks	1	\$19.48	High school diploma or equivalent
Construction Occupations		6	\$16.44	
472031	Carpenters	6	\$16.44	High school diploma or equivalent
Installation/Maintenance/Repair Occupations		184	\$18.69	
492094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	100	\$19.00	Postsecondary non-degree award
499071	Maintenance and Repair Workers, General	67	\$13.40	High school diploma or equivalent
499098	Helpers—Installation, Maintenance, and Repair Workers	7	\$11.93	High school diploma or equivalent
499099	Installation, Maintenance, and Repair Workers, All Other	3	\$20.94	High school diploma or equivalent
491011	First-Line Supervisors of Mechanics, Installers, and Repairers	2	\$25.46	High school diploma or equivalent
499041	Industrial Machinery Mechanics	2	\$22.43	High school diploma or equivalent
492092	Electric Motor, Power Tool, and Related Repairers	1	\$19.33	Postsecondary non-degree award
499021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1	\$16.89	Postsecondary non-degree award
499043	Maintenance Workers, Machinery	1	\$18.83	High school diploma or equivalent
Production Occupations		156	\$13.73	
519061	Inspectors, Testers, Sorters, Samplers, and Weighers	150	\$13.90	High school diploma or equivalent
513093	Food Cooking Machine Operators and Tenders	3	\$9.99	High school diploma or equivalent
516052	Tailors, Dressmakers, and Custom Sewers	2	\$12.14	Less than high school

⁵ Job Openings from MDES 2015

514041	Machinists	1	\$18.90	High school diploma or equivalent
Transportation/Material Moving Occupations		120	\$16.90	
533033	Light Truck or Delivery Services Drivers	100	\$12.63	High school diploma or equivalent
533032	Heavy and Tractor-Trailer Truck Drivers	11	\$17.35	Postsecondary non-degree award
531031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	5	\$23.73	High school diploma or equivalent
531021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	2	\$21.68	High school diploma or equivalent
533022	Bus Drivers, School or Special Client	2	\$9.10	High school diploma or equivalent

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